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Evaluation of Academic Policy Formulation and Implementation, Transmountain Early College High School, El Paso, Texas

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EVALUATION OF ACADEMIC POLICY FORMULATION AND IMPLEMENTATION
TRANSMOUNTAIN EARLY COLLEGE HIGH SCHOOL
EL PASO, TEXAS

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Dean of the Graduate School

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EVALUATION OF ACADEMIC POLICY FORMULATION AND IMPLEMENTATION
TRANSMOUNTAIN EARLY COLLEGE HIGH SCHOOL
EL PASO, TEXAS

By

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This dissertation is dedicated to Emily, who is and always will be my inspiration.

ABSTRACT

Transmountain Early College High School (TMECHS) opened in August 2008, created by a partnership between the El Paso Community College and the El Paso Independent School District, and supported in its conceptualization, start-up, and first few years operation by grant funding and guidance from the Texas High School Project and its major foundation funding partners, the Bill & Melinda Gates Foundation, the Michael and Susan Dell Foundation, and Communities Foundation of Texas. TMECHS is a T-STEM early college high school.

As schools open and begin implementation of ambitious reform such as that which provides the foundation for a T-STEM early college high school, focus is inevitably on efficient, comprehensive design and implementation, yet even with reflection and ongoing revision of processes, there may not be sufficient opportunity to step back to view and evaluate processes and procedures with an unbiased, discerning eye. Like other reform initiatives, ECHSI and T-STEM policies are laid out in official documentation based on core values and criteria, federal and state public school requirements, and independent school district policies, but individually, schools are not only bound by policy, but are designed, organized, and run based on discussions, negotiations, and decisions guided by funding agencies and made by local partners and school administrators. Organizational constraints, as well as a variety of ongoing and reflective decisions, continually impact processes.

This study was designed to evaluate how T-STEM and ECHSI goals and requirements were merged and formulated into processes, then translated in

implementation at a new early college high school. The research objective was to investigate not only how policy and processes were conceptualized and designed, but how they have played out at the school level as well. Data with regard to academic policy formulation and implementation was collected using qualitative techniques, document review and participant interviews. Analysis was conducted to build a case study and was guided by co-construction theory to reveal how actors and contexts interact in a dynamic multi-directional manner to influence how policy generalities and specifics look in practice.

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CHAPTER ONE

INTRODUCTION

Transmountain Early College High School (TMECHS) opened in August 2008, created by a partnership between the El Paso Community College and the El Paso Independent School District, and supported in its conceptualization, start-up, and first few years operation by grant funding and guidance from the Texas High School Project and its major foundation funding partners, the Bill & Melinda Gates Foundation, the Michael and Susan Dell Foundation, and Communities Foundation of Texas. The school opened with a single freshmen class of 125 students, with plans to add freshmen classes at the beginning of each consecutive year until the entire student body, comprised of four grade levels, freshmen through senior, would total no more than 500 students.

The Early College High School Initiative (ECHSI) is designed to provide the means to realign high school curricula with college readiness by implementing new and innovative ways of merging high school and college coursework that will increase opportunities, accelerate college pathways, and promote access and success. ECHSI policy is described as building on what works while incorporating new strategies to set high expectations, increase rigor, and accelerate pathways to completion of a high school diploma and college credit (*Early College High School Initiative*, 2009). The ECHSI is described on its official web site as “a bold approach, based on the principle that academic rigor, combined with the opportunity to save time and money, is a powerful motivator for students to work hard and meet serious intellectual challenges (Welcome to Early College High School, 2009, par. 1)

Partner organizations of the ECHSI have created or redesigned almost 160 schools in 24 states and the District of Columbia since 2002. Principle missions of these schools include “providing low-income youth, first-generation college goers, English language learners, students of color, and other young people underrepresented in higher education” with the opportunity to “simultaneously earn a high school diploma and an Associate’s degree or up to two years of credit toward a bachelor’s degree free” (Welcome to Early College High School, 2009, par. 2). The ideal outcome of ECHSI reorganization of the traditional high school format for individual students is the achievement of a diploma and college credits up to an Associate Degree in four to five years.

TMECHS is not only an early college high school, but is a Texas Science, Technology, Engineering, and Mathematics (T-STEM) Academy as well. Its design has been guided by the merging of the core principles of ECHSI and T-STEM, as well as by its location in a southern U.S. border community. In addition, there are several educational reforms that have contributed or influenced TMECHS’ policies, programs, and processes as they are embedded in ECHSI and T-STEM or have been incorporated into the school’s design as a means of student support or guidance. By way of the collaboration of its partners and funding agencies and with a mission of serving its community’s underrepresented student population, ECHSI and T-STEM principles are supported by initiatives such as the P-20 education model and the goals and criteria of dual credit enrollment.

TMECHS is located in northeast El Paso, Texas. El Paso is a city highly regarded for its unique cultural blend and friendly people. The city was founded over four hundred

years ago as an outpost for traders and missionaries. Over the years El Paso has experienced dynamic growth with the development of an integrated international trade region with Juarez, Mexico, the fifth largest city in Mexico. According to the 2000 Census, El Paso is the fifth largest city in Texas and the twenty-third largest city in the United States (*The City of El Paso, Texas*, 2010). 2009 data shows that Hispanics, a majority Mexican-American, make up 72 % of El Paso's population of just over 700,000. El Paso differs from the majority of other U.S. cities in its very high percentage of Hispanic population. Its sister city Juarez has a population of over 1.2 million people. Despite its positive attributes, El Paso has a low economic base and a median income level below the U.S. average (*Paso del Norte Health Foundation*, 2010)

Immigration to the United States is greater today than to any other country and people are emigrating from Mexico more than from any other country. In 2008, approximately 12 million Mexican-born people lived in the United States. By 2050, Hispanics will represent 25 % of the U.S. population, and 11% of all Mexicans will be living in the United States. Romero wrote that "these demographic shifts affect the politics, economies, and cultures of the neighboring nations, forcing them to evaluate the future of their binational relations" (2008, p. 11). Ramifications for public education are great and in border communities such as El Paso the efficacy of educational reforms can be tested.

Evaluation of the current status of education and its future, including how to create transitional programs into higher education, is ongoing. Because education is crucial for the economic performance of a country and its individuals, all students need to be incorporated in the planning process for competitive and adaptable school models.

Three to six percent of increased output and economic benefit to a country is attributed to a single additional year in educational attendance (Romero, 2008, p. 193). 2008 statistics showed that on average Mexican immigrants' incomes at \$22,300 are considerably lower than those of native-born citizens (\$45,400) and the average for all immigrants combined (\$37,000) (p. 193). This disparity is most easily explained by a lack of education; research has shown that over 60% of Mexican immigrants do not finish high school, compared to fewer than 10% of those born in the United States (p. 193). Increasing opportunities for higher education among all those currently underrepresented is a key concern and Hispanic youth are a key component of this population.

Viable and replicable programs that increase opportunities for higher education among all youth, including Hispanics and other underrepresented populations are crucial in our nation's response to the "realities of a knowledge-based global economy" (Romero, 2008, p. 190). The skills and foundational knowledge that a college education affords students is highly regarded in today's society even if employees are further trained on the job. While it is promising that college enrollment among Hispanics has increased in recent years, Latino students are still half as likely to finish an undergraduate education as other students (Romero, p. 193). Because a lack of education equates to the potential for higher poverty rates in communities across the United States it is therefore in the interest of the United States to address missed economic opportunities (p. 193). Suro, director of the Pew Hispanic Center, proclaimed that,

Latino poverty will not be remedied by the welfare-to-work programs that are now virtually the sole focus of U.S. social policy, and it will not be fixed by trying to close the nation to further immigration. The Latino poor are here and they are not going to go away. Unless new avenues of upward mobility open up for Latino immigrants and their children, the size of America's underclass will quickly double and in the course of a generation it will double again. (in Romero, 2008, p. 193)

While addressing education deficits in the United States poses great challenges of its own (Romero, 2008, p. 196), the anticipated demographic shift of Hispanics becoming 25% of the population by 2050 heightens those concerns and El Paso and TMECHS are a prime location for research into the efficacy of new programs to close gaps, realign educational efforts, and reach underrepresented populations. Recent statistics project that between 2008 and 2015 the elementary and middle school aged student population in the United States will increase by 3 % (p. 192). As public schools open throughout the United States, more and more of the student population is Hispanic. From 1984 to 2002, as the total number of public schools increased by 16%, Hispanics represented 64% of total school enrollment increases (p. 192). Successful educational reform efforts in El Paso may become valuable models nationwide as the face of public education continues to change.

In addition to addressing education deficits, jobs today require more education than those of the past because of the rapid advances in technology, and it becomes increasingly important for students to continue education after high school. Statistics document 20% of workers needing some college in 1959 compared to 56% in 2000

(Educational Testing Service, 2000). States across the country are responding to this change by instituting reforms meant to improve not only student achievement, but access to and success in higher education. In order to achieve their goals, states and communities, like El Paso, Texas, are attempting to create a “seamless system of education” in which all levels of education — preschool through college — educate as one system instead of several. These efforts are named K-16, P-16 or P-20 systems (Educational Testing Service, 2000).

Although K-16, P-16, and P-20 education systems are similar in nature, there are differences among them:

- A K-16 system integrates a student's education from kindergarten through a four-year college degree.
 - A P-16 system integrates a student's education beginning in preschool (as early as 3 years old) through a four-year college degree.
 - A P-20 system expands the P-16 system to include graduate school education.
- (P-16, 2010)

Because of the nature of the collaboration among the independent school districts, the El Paso Community College, the University of Texas at El Paso, and grant funding institutions, TMECHS and the other early college high schools in El Paso embody principles of the P-20 education model. Students are encouraged and counseled not only as to how to pursue associate's degrees, but bachelor's and graduate degrees as well.

Statistics show that students are earning fewer advanced degrees in science and engineering from colleges and universities in the United States when compared to schools in other countries. In 1970, more than half of the doctorates in science and engineering were granted by universities in the United States; by 2010, the rate is expected to be 15% or less (Romero, 2008, p. 193). Because global companies search the world for qualified potential employees, as well as to set up operations, the U.S. educational institutions must diligently work to develop a competitive and adaptable system (p. 193). The T-STEM initiative is a public-private initiative of academies, professional development centers, and networks designed to improve instruction and academic performance in science- and mathematics-related subjects at secondary schools. The T-STEM Initiative is designed for:

- districts and open enrollment charter schools (academies)
- partnerships consisting of universities, regional education service centers, local education agencies, businesses, and non-profit organizations (centers)
- Non-profit organizations (networks)
- Institutions of Higher Education (leadership) (Texas Education Agency)

T-STEM goals and guidance have been influential in the development of academic policy at TMECHS because it is not only an early college high school, but a T-STEM academy as well.

An introduction of the areas that support the rationale for this study would not be complete without a discussion of dual enrollment, a means of addressing educational inequities via partnerships between high schools and colleges, both within the early

college high school model and in traditional high schools. Dual credit programs enable teenagers to take college courses while still in high school. Courses are taught by college credentialed high school faculty or by postsecondary faculty on a college campus. Dual credit courses can also be offered through distance learning, satellite campuses, or online courses (Vargas, 2008).

Even though progress has been made since the Civil Rights Movements of the 1960s, race, income, and family educational background are still indicators of success in higher education. A report on post-secondary completion rates and underrepresented students documented the following statistics:

- First-generation college students are about twice as likely as those with college-educated parents to withdraw from a four-year college before the second year. Upper income students are seven times more likely than low-income students to earn a Bachelor's degree by age 24.
- African Americans, who represent 16% of the 15-18 year-old population, earn only 10% of all associate's degrees.
- Hispanics, who constitute 14% of that population, earn only 7% of Associate's degrees.
- Only 18% of African Americans and 10% of Hispanics earn a Bachelor's degree by age 29, compared to 34% of whites.
- Minority students are often concentrated in the 40% of high schools that do not offer advanced placement (AP) classes (Hoffman, 2003)

There are positive implications for minority students when dual credit is offered individually in a traditional high school setting or in early college high school programs.

Because TMECHS is an early college high school and a T-STEM Academy within a P-20 framework, educational inequities are being addressed in a multi-layered effort. On the one hand, this combined effort may make the program that much more of a model for other schools, but on the other, it may also make its mission that much more difficult.

Summarized here are the mission and goals of ECHSI and T-STEM, guidelines that were incorporated into policy and program development and implementation at TMECHS. And as a prelude to later chapters in which the school is profiled and research findings are analyzed, in some cases, generally stated directives are left considerable latitude in the specification of processes, while in others considerable specifications leave very little wiggle room in the design of processes. Analyses show how processes have unfolded and propose ways in which they may be changed to better satisfy the school's mission and to better serve potential and enrolled students.

ECHSI is the first major design influence discussed here. Key design features meant to positively impact the mission and goals of ECHSI, location on a college campus, rigorous academic program, and a supportive environment, are all crucial to effectively serving a majority target population that has traditionally been underserved in higher education. Programs should enable these underserved and underrepresented students to earn both high school diplomas and their associate's degrees in 4 to 5 years with no cost to them. (*Middle College National Consortium*). ECHSI guidelines for how

early college high schools should endeavor to accomplish the aforementioned tasks are generally stated as follows:

- Reach out for students who are underserved by the regular schools.
- Demand a cooperative relationship between the district high school administration and the college president.
- Offer a different sequence of courses from the 10th grade and an accelerated program from the 9th grade to the associate's degree, which can be achieved in five years or less, instead of six.
- Combine the resources of a high school on the college campus with the college facilities (gym, library, cafeteria), making them all available to the early college high school student.
- Require active college campus collaboration from the college administrative structure: faculty interchange, support from the college divisions of finance, admissions, scheduling and counseling under a college-appointed administrator.
- Enhance the role of high school faculty.
- Integrate high school and college study in an articulated program. (Adelman, 2006)

Partners and administrators are well aware that design principles are meant to make the transition from high school to college easier than it might be otherwise, as well as to facilitate it. Ways in which early college high schools are charged with consciously integrating the high school and college experiences follow:

- Curriculum is designed as a coherent unit, with high school and college-level work blended into a single academic program.
- Students are allowed to focus on their studies in their last years of high school, rather than be distracted by the daunting maze of college and financial aid applications.
- College is far more affordable for students and their families, who save two years worth of college tuition.
- By the time students have graduated from an early college high school, they have gone well past the "20 credit threshold" that is a key breaking point between students who complete a college degree and those who never finish college.

(Adelman, 2006)

Policy statements are easily documented in the design of an early college high school, but it is the design's formulation and implementation of processes that make mission statements a reality and that became a focus of this research. One might call processes the nuts and bolts of the design, the areas where scrutiny should be employed so it can be determined to what extent individual processes are well designed and successful, and where minor changes might enable a design as a whole to become more effective, and thus more successful.

In sum, ECHSI boils its mission down to five core principles. The intents of the principles are clear, while specifics with regard to how to accomplish associated tasks in the creation and operation of an early college high school are not. Because of this lack of specification, each early college high school's design, process, and programming is

meant to be unique while still sharing common and similar aspects with regard to missions and goals. The Core Principles are listed here and further elaborated on the Review of Literature section on the Early College High School Initiative:

- Core Principle 1: Early college schools are committed to serving students underrepresented in higher education.
- Core Principle 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.
- Core 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.
- Core 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.
- Core Principle 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. (*Early College High School Initiative*, 22 April, 2009)

Since TMECHS is a T-STEM early college high school, it is also bound by T-STEM Academy policy guidelines, which in some areas are more specific than what ECHSI sets forth. An example of increased specification is found with regard to

admissions and recruitment requirements. In The T-STEM Academies Design Blueprint, in Benchmark 3, Student Outreach/Recruitment, Selection and Retention, 3.2 Open Access, the following requirements are documented:

- a. The Academy develops a lottery-based selection process that is based on serving populations of high-need and underrepresented students. Application for the lottery does not include onerous requirements that might deter all but the most motivated students.
- b. The Academy student population must consist of greater than 50% economically disadvantaged students or a majority minority population.
- c. Application does not include requirements for grades, TAKS scores, requirements, discipline history, or teacher recommendations. (*Texas Science, Technology, Engineering, and Mathematics Academies Design Blueprint*, 27 October 2009, p. 5)

Other T-STEM Blueprint benchmarks are Mission Driven Leadership; School Culture and Design; Teacher-Leader Selection; Development and Retention; Curriculum and Instruction; Strategic Alliances; and Academy Advancement and Sustainability. These seven benchmarks and the aforementioned Benchmark 3 are all written to provide a framework for the promotion of "education strategies that integrate the teaching of STEM in a way that challenges students to innovate and invent" (p. 1, par. 1, Purpose) and includes guidance for staff and faculty selection, professional development, curriculum creation and alignment, and technology integration. These benchmarks are similar in form and intent to early college high school core principles

and evaluative benchmarks with the added requirement that a majority of the students pursue a STEM the school's dynamic, its policies and processes, were impacted by the merging of these two educational reform efforts.

In its statement of purpose, a T-STEM Academy is designed to prepare students to pursue postsecondary level coursework and careers in science, technology, engineering, and math. Yet, early college high school students are already pursuing postsecondary level coursework. The coupling of the ECHSI mission with that of a T-STEM Academy complicates matters in that the school's administration, staff, and faculty do not only serve two masters, a high school and a college, but also strive to satisfy two major educational reform initiatives that although target the same population, perhaps could rethink how in concert they could select and serve them more efficiently.

While ECHSI core and T-STEM academies principles, with their underlying criteria of a P-20 model and dual credit enrollment, are all evident in the design of TMECHS, how these principles have been applied to and within the school's design and processes and how successful that design has been is the focus of the research. These principles and guidelines not only influenced policy and its implementation, but were influenced by them as well while TMECHS partners, faculty, and staff interacted about and within them. It is these dynamics within TMECHS contexts that impact a school's development and that were investigated.

PROBLEM STATEMENT

As schools open and begin implementation of ambitious reform such as that which provides the foundation for a T-STEM early college high school, focus is

inevitably on efficient, comprehensive design and implementation, yet even with reflection and ongoing revision of processes, there may not be sufficient opportunity to step back to view and evaluate processes and procedures with an unbiased, discerning eye. Like other reform initiatives, ECHSI and T-STEM policies are laid out in official documentation based on core values and criteria, federal and state public school and higher education requirements, and independent school district policies, but individually, schools are not only bound by these policies, but are designed, organized, and run based on discussions, negotiations, and decisions guided by funding agencies and made by local partners and school administrators. Organizational constraints, as well as a variety of ongoing and reflective decisions, continually influence processes with implementation impacting the character of processes and associated policies.

Because TMECHS is new and dedicated to the visions of ECHSI and T-STEM, its administration, staff, and faculty may benefit from an evaluation of their experiences. Knowledge and insight revealed may help guide this T-STEM early college high school through continuous development and improvement in key areas. And insight gained in this study may be useful to stakeholders in El Paso, as well as for those involved in the initiative nationwide. When policy implementation does not render anticipated results in their ideal formulation, evaluation of the policy and its implementation may provide evidence that policy modification would be beneficial within the dynamics of the new and developing school setting that a T-STEM early college high school on the U.S. Mexico border represents. On the other hand, the identification and documentation of successful methods and strategies can serve as encouragement and offer models for

high schools across the nation to follow in redesign, whether partially or to the more comprehensive extent early college high schools have.

Notable with regard to this research project is how ECHSI and T-STEM aim to provide a rigorous, academic education and college preparation for those who might otherwise not pursue and achieve that goal. ECHSI enhances this goal by accelerating the pathway to a college education for those underserved and underrepresented for whom the financial burdens of a college education can sometimes be prohibitive. T-STEM Academy policy is designed to “increase student achievement by engaging and exposing students to innovative science and math instruction while simultaneously acting as demonstration sites to inform math and science teaching and learning statewide” (*Texas Science, Technology, Engineering, and Mathematics Academies Design Blueprint*, 27 October, 2009). Because this study investigated and evaluated the processes of a school located on the U.S. Mexico border that strives to serve an underserved and underrepresented student population that is primarily Hispanic, lessons revealed may be very different from those that could be documented by studies on other T-STEM early college high school locations elsewhere in the United States.

In addition, because ECHSI redesigns high schools to incorporate up to two years of college coursework, two previously distinct branches of the education pathway, secondary schools and institutions of higher education are merged into one. Being a T-STEM early college high school, teenagers are taking college classes in a program that incorporates the rigor of a T-STEM Academy in a setting that merges high school with college. As ECHSI merges with T-STEM and high school merges with college, the dynamics of those mergers and their impact on implementation is worthy of

investigation. Actors at several levels of administration were interviewed. This researcher was cognizant of how “multiple levels of educational systems may constrain or enable implementation” and how “that implementation may affect those broader levels” (Datnow, 2006, p. 107). While there have been studies conducted on the implementation of ECHSI, studies that will be reviewed later in this proposal, evidence was not found of academic policy formulation and implementation research having been conducted in this same manner on a T-STEM Early College High School in a U.S. Mexico border community.

RESEARCH OBJECTIVES

This study was designed to evaluate how T-STEM ECHSI goals and requirements were merged and formulated into processes, then translated in implementation at an early college high school in its second year of operation. The research objective was to investigate not only how policy and processes were conceptualized and designed, but how they played out at the school level as well. Data with regard to academic policy formulation and implementation was collected using qualitative techniques, document review and participant interviews. Analysis was conducted to build a case study and was guided by co-construction theory to reveal how actors and contexts interact in a dynamic multi-directional manner to influence how policy generalities and specifics look in practice.

First reviewing policy documentation allowed for an investigation into whether aspects of policy intent were modified from ideals in formulation and in implementation as interview data was reviewed and themed. Several factors were taken into account as

findings were evaluated; these factors included policy goals, leadership styles and strategies, external and internal politics, interrelationships among various levels of administration and staff, school design, school culture, student population, and other contextual factors. The main policy focus of the study was academics, what happens when aspects of policy specific to academics are put into practice and translated in implementation at the local level, in the school.

This study on the formulation and implementation of academic policy began as TMECHS entered its second year of operation in the fall of 2009. Goals for evaluation included five categories: student recruitment and enrollment, academic design, family engagement, college readiness, and coursework and support structures. Policy and outcomes documentation were reviewed and face-to-face interviews with administrators were conducted. Once research efforts concluded, a case study was developed in which the interactions of partners, staff, faculty, students, and their families were taken into consideration. Theme-based results were analyzed and synthesized before recommendations were considered and proposed to provide insight into the effectiveness of current processes and their potential modification.

POLICY DOCUMENTATION

Documents reviewed included the Grant Agreement between the El Paso Independent School District (EPISD) and the Texas High Schools Project (THSP)/Communities Foundation of Texas (CFT) (Appendix A); the Texas Science, Technology, Engineering and Mathematics (T-STEM) Academies Design Blueprint (Appendix B); the Early College High School Initiative (ECHSI) Core Principles

(Appendix C); the Interlocal Agreement (Memorandum of Understanding - MOU) between EPISD and the El Paso Community College (EPCC) (Appendix D); and the El Paso Community College Procedure for High School Dual Credit Requirements (Appendix E). The Benchmark Tool for Early College High Schools developed collaboratively by early college high school intermediary organizations (Appendix F); the notification letter of the addition of selected test scores for use in determining college readiness and placement of students in enrolling in college courses at EPCC (Appendix G); College & Career Readiness standards developed by EPISD (Appendix H); and the Distinguished Achievement ECHS Program @ TM and Associate Degree document that set forth course alignment and course sequencing (Appendix I) were also among the documentation researched. These documents outline and explain requirements and guidelines that have been followed in the planning and implementation stages of TMECHS. Notable was the limiting specificity in some areas, leaving little room to vary how programs and processes could be designed and enacted. In other areas, while guides and recommendations were in place, the nuts and bolts of the formulation and implementation of programs and processes at the partnership and school level were subject to negotiation, agreement, organizational constraints, and thus the decisions of community college and school district personnel and resulting revisions. In all cases, the policies influence the processes and the processes reflect the decisions that were made and the context in which the processes were implemented.

OUTCOMES DOCUMENTATION

It became evident as policy documentation was reviewed and interviews were conducted that if outcomes with regard to academics were incorporated it would help

enhance an understanding of the case study built in the analysis. Documentation of student recruitment and attrition rates, standardized test scores (course placement and high school performance rates), course completion rates (core, elective, dual credit and STEM), staffing and job roster descriptions, and services that have trained administrators, staff, and faculty were accessed and used to create a school profile, chapter four. Insight from outcomes documentation was also combined in analyses with qualitative interview data and policy documentation reviews to enhance the development of central themes in the case study.

RESEARCH QUESTIONS

Research categories and questions were conceptualized and written to provide a structure for open-ended face-to-face interviews. Co-construction theory guided the design of a question grid that would enable an investigation into interaction among all actors involved in the development of academic policy and processes by way of analysis and synthesis of policy research and interview data. While better able to converse with administrators once policy documentation had been reviewed and interviews were conducted, there were several preliminary questions that led to the five categories pursued in interviews.

Two initial questions framed the development of the research design; these were how ECHSI and T-STEM core principles were articulated in policies and processes with regard to academics for TMECHS and how these policies and processes were then translated in implementation by local partners and administrators. Five more specific categories were developed from these two preliminary questions; how students were

recruited for and enrolled at TMECHS, how academic processes were designed and tailored to fit the student population, how processes were designed to encourage and support family engagement, how college readiness was measured and addressed in practice, and how coursework and support structures were designed and facilitated. Each of these categories was divided into two lines of questioning; for each, one had to do with policy formulation and the other had to do with implementation.

The first category of questions which addressed how students were recruited for and enrolled at TMECHS also addressed how those policies might impact processes once the students were enrolled. While there are criteria within ECHSI that dictate how schools should enroll a majority of students that are low-income and traditionally underserved in higher education, and specific criteria set forth in the T-STEM Blueprint, this researcher wondered how policies and processes were designed and carried out, and how those designs and their implementation impacted not only the school's mission and culture, but the students, staff, and faculty as well. Within this category of questioning was when and how students were presented with options and requirements representative of the merged aspects of high school and college and whether there was room for any sort of screening based on student motivation. It was anticipated that discussions would reveal whether and how the partnership was endeavoring to enroll students that not only satisfied the school's criteria but perhaps ensured that they were good fits for a school so different from a traditional high school.

How student motivation was addressed with regard to not only recruitment, but once students had been enrolled and attending classes was also of concern. Therefore, the second category of questions addressed how academic processes were designed

and tailored to fit the student population based on its characteristics, as well as the goals of a rigorous curriculum. An investigation into operational issues involved in the formulation and implementation of degree plans that merged secondary and college components in a T-STEM environment was incorporated into this category. Because high school age students would be taking dual credit classes in an enhanced technologically advanced school setting, questions in this category could reveal how associated requirements were offered and coordinated, how high school and college curriculums were merged into individual degree plans, and how high school and college courses merged onto individual student schedules. In this category of academics, conversations about how teachers and administrators were recruited for, hired by, and provided professional development would be pursued because teachers are a most critical component in the success of the teaching and learning.

The third category of family engagement addressed another key component of ECHSI and T-STEM principles. Students often need support within a school as well as outside of it in order to be successful; this would be of heightened concern in the rigorous environment of a T-STEM early college high school. How family members were involved in a variety of aspects of the early college high school experience was therefore of concern with regard to students' becoming accustomed to their school environment and being successful academically.

College readiness was the fourth category of questions, not only how it was measured, but also how it was addressed in practice. The dual focus included how students were prepared, supported, and monitored, not only with regard to college

placement tests, but also with regard to the requirements necessary to complete a high school diploma and college coursework.

The questions on college readiness led into the fifth and final question category of coursework and support structures. With regard to policy formulation, this topic addressed how policies and programs were designed to ensure rigorous, yet supported academic programs. On the policy implementation side what high expectations and rigor looked like at TMECHS and how that rigor was supported in practice would be investigated.

In retrospect, the five categories in the interview grid successfully prompted fruitful conversations to address key question sets. The categories, Student Recruitment and Enrollment, Academic Design, Family Engagement, College Readiness, and Coursework and Support Structures were placed in an Interview Grid divided into two columns, one on Policy Formulation and one on Policy Implementation. Under each of these columns, a single question was associated with each of the five categories. Within the chapter on Methodology, these embedded policy formulation and implementation questions will be further explained with regard to how they prompted conversations in individual interviews.

Because the plan was to conduct interviews with administrators from several organizations charged with planning, oversight, facilitation, and implementation of policies, programs, and processes for TMECHS, personnel were selected from the Communities Foundation of Texas/Texas High School Project, the El Paso Community College, the El Paso Independent School District, and the University of Texas at El

Paso (UTEP). I included UTEP's Provost and Associate Provost in the interviewee list because UTEP has assisted the early college high schools with programming to expose students to T-STEM and higher education courses of study and careers, and because UTEP will no doubt enroll many of TMECHS graduating seniors.

Once full approval had been secured from UTEP's Institutional Review Board (IRB), interviews were scheduled and documentation not previously available from public domain was acquired from EPISD and EPCC. Personnel from the various organizations were supportive of the study and willing and able to make arrangements to interview and to provide documentation. Processes involved in securing approvals, requesting documents, and scheduling interviews are explained in Methodology as well. A profile of TMECHS is provided in Chapter Four and includes results of policy and outcomes documentation review. Further discussions of policy and outcomes documentation and interviews are discussed, themed, and synthesized in Chapter Five, Analysis and Interpretation of Research Results, along with recommendations and implications for future research.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

In order to lay a foundation for the research ahead, several areas that may impact or may be influenced by the development and administration of a T-STEM early college high school in a border community are examined. ECHSI, T-STEM, and its combined effort, TMECHS, are placed contextually as recent and current reform efforts within a broader lens of economic, political, and social reforms. Educational reform movements and their component parts are categorized pursuant to impetus, rationale, development, implementation and outcomes with a focus on secondary education and its transition to college or university studies. The development, implementation, and evaluation of reform and its policies are addressed.

CONTEXTUALIZATION OF ECHSI, T-STEM, AND TMECHS

Public school in the United States today was born out of the Common School, which was developed post-Civil War. With the Industrial Revolution of the late nineteenth century, goals of providing college preparation for some while offering an education to others so that they could become competent, productive members of society began to battle for priority in the schools. Throughout America's history has been the underlying democratic ideology that all of our children should be afforded the opportunity for an education, as individuals and as members of society. Having recurred in reform efforts, the battle for priority between a practical and an academic, college preparatory education seems to have settled on a goal for all children to be offered the

opportunity for an equivalent, rigorous education, as well as equivalent opportunities in their lives. Reform has striven to provide each and every student the tools necessary to succeed in the curriculum and at whatever life and work goals they choose for themselves. In today's competitive global environment, as in previous eras, the ideal to serve the individual as well as society is paramount and considered crucial for keeping our society and our nation strong. Skills that were once considered necessary for just some citizens are now deemed necessary for all as technology advances at a phenomenal rate and competition with other countries has economic implications.

John Dewey has been characterized as "arguably the largest single influence on American education in the twentieth century" (*Jossey Bass Reader on School Reform*, 2001, p. 3), showing profound understanding of schools and reform when he referenced the Sisyphean cycle: "the more things change, the more they stay the same" (p. 3). One hundred years ago, Dewey predicted the failure of many reform efforts (p. 3). A later discussion of implementation and its external and internal dynamics will provide cautionary advice to those who create policy, those who implement policy, and those who interpret outcomes. The discussion will address how the specification of policy and the dynamics of implementation can influence the character of reform with regard to its character and perseverance.

As evidenced by the ideas in the following excerpt, Dewey's insights are still accurate today:

Consider the wage by which a new study is introduced into the curriculum. Someone feels that the school system of his (or quite frequently nowadays her)

town is falling behind the times. There are rumors of great progress in education making elsewhere. Something new and important has been introduced; education is being revolutionized by it; the school superintendent, or members of the board of education, become somewhat uneasy; the matter is taken up by individuals and clubs; pressure is brought to bear on the managers of the school system; letters are written to the newspapers; the editor himself is appealed to to use his great power to advance the cause of progress; editorials appear; finally the school board ordains that on and after a certain date the particular new branch – be it nature study, industrial drawing, cooking, manual training, or whatever – shall be taught in the public schools. The victory is won, and everybody – unless it be some already overburdened and distracted teacher – congratulates everybody else that such advanced steps are taking. (*Jossey Bass Reader School Reform*, 2001, p. 3-4)

The next year, or possibly the next month, there comes an outcry that children do not write or spell or figure as well as they used to; that they cannot do the necessary work in the upper grades, or in the high school, because of lack of ready command of the necessary tools of study. We are told that they are not prepared for business, because their spelling is so poor, their work in addition and multiplication so slow and inaccurate, their handwriting so fearfully and wonderfully made. Some zealous soul on the school board takes up *this* matter; the newspapers are again heard from; investigations are set on foot; and the edict goes forth that there must be more drill in the fundamentals of writing, spelling, and number. (*Jossey Bass Reader School Reform*, 2001, p. 3-4)

With this type of understanding of the nature of the education system and the impact and repercussions of efforts to enhance its efficiency and reach, it stands to reason that some reflection and evaluation of the history and processes that contribute to the development of programs, their implementation, and their perseverance is imperative if we are to effectively evaluate policy formulation, process design, and implementation.

In recent decades, just as in the past "poor education has been blamed for economic decline and tougher education proposed as a solution" (Tyack and Cuban, 2005, p. 141). Public education and reform efforts are often expected to enable "prosperity both national and individual" (p. 141). Elwood P. Cubberley's 1909 announcement that "whether we like it or not, we are beginning to see that we are pitted against the world in a gigantic battle of brains and skill with the markets of the world, work for our people, and internal peace and contentment as the prizes at stake" (p. 141) has been echoed repeatedly, recently in a bold way in *A Nation at Risk* (1983). In American society, public education has been entrusted with "[preserving] the best of the past, [making] wise choices in the present and [planning] for the future" (p. 142). As society becomes more and more complex so do reform efforts, designed to enable the American education system to meet the demands head on. Only with continuous, well-conceived and applicable evaluation of policy formulation and implementation can we know whether reforms are successful.

Even with comprehensive research and evaluation of circumstances, climate, design, implementation, and outcomes, because people often are caught up in moments, movements, and intentions, it is often only with distance from events that shape our times that some seemingly vital issues fade in significance while others take

the spotlight. Times change and the present becomes the past. Reese (2005) reminds us that no one can predict how future historians will characterize the events of a generation, but proposes that with regard to the current generation and its concepts of American public schools, politicians, educators, and citizens share a great passion with regard to its responsibilities and outcomes. If we are indeed living in an era of momentous change, these years must inevitably be both exciting and troubling, "filled with bold plans for school innovations and, depending on one's perspective, far-reaching or tepid reforms" (Reese, 2005, p. 322). How reform is developed, specified, and implemented influences how successful and perseverant an initiative will be.

Educational reform designs have been characterized as "alterations of curriculum and teaching practices with the ultimate goal of improving society" (Reese, 2005, p. 1). Poet Alexander Pope's words represented this sentiment when he wrote that education was not only powerful, but crucial for "socializing the young for the sober responsibilities of adulthood" (p. 1). Early college high schools are one aspect of recent efforts designed to align high school and college, an initiative focused on meeting the challenge of preparing a diverse population for success as individuals and in ways that benefit society and the economy [Southern Regional Education Board (SREB), 1999-2009]. By adding the T-STEM initiative, TMECHS represents a coupling of this alignment with the goal of enhancing education to better meet the needs of a technologically advancing society. Three broad impetuses driving reform efforts that benefit the individual and society are raising achievement in high school and college and reducing the number of students who require developmental education in college; increasing enrollment and persistence in postsecondary education; and encouraging an

increased percentage of students to earn postsecondary degrees and improve their chances of career success (Southern Regional Education Board (SREB), 1999-2009). A study such as the one proposed herein has the potential to provide insight into whether design components are being implemented as intended and optimally or whether modification to policy specifics should be considered.

ECHSI combined with a T-STEM focus may be understood as the culmination of the timeline of educational reform efforts. Tyack and Cuban (1995) wrote that, "rather than starting from scratch in reinventing schools, it makes most sense... to graft thoughtful reforms onto what is healthy in the present system," while "setting high goals" (p. 132-133). The intent of ECHSI is to merge sound components of design, instruction, and support with the challenges of increased rigor and expectation for students who have historically been underserved in our society. By imposing and embedding aspects T-STEM with its science, math, and technology focus, on ECHSI, a school driven by these reforms addresses two very critical needs in our society today. Educators who subscribe to the wisdom of adding innovation to the tried and true will truly benefit from reflection and evaluation of a relatively young and unique reform effort by providing a foundation for action based on evidence revealed.

It is based on this idea that educators can learn from the study of a history of reform movements that better schooling results from steady, reflective efforts. It is perhaps true that it may take a generation or more to be able to comprehensively evaluate whether T-STEM academies and early college high schools have effectively met the needs of a rapidly advancing technological society and have orchestrated essential aspects of classroom environments and effective learning strategies to

facilitate student success. Still, because TMECHS is young, an evaluation of what is happening in implementation as the school matures can reveal whether it is building a strong foundation for perseverance and success on several levels. Elmore and McLaughlin (1983) wrote that, "Policy can set the conditions for effective administration and practice, but it can't predetermine how those decisions will be made" (in Tyack and Cuban, 1995, p. 136). Local partners design processes based on policy and administrators, staff, and faculty implement those processes; inevitably granting, by choice or because of organizational constraints, certain aspects of any program more weight, value, and importance in their daily routines.

People and institutions have not and do not necessarily share or agree on interpretations of events, yet all people and institutions are products of history "whether they are aware of it or not" (Tyack and Cuban, 1995, p. 6). Inferences may or may not be accurate and appropriate, and people may or may not be as attentive as they should be to context and complexity. Qualitative studies are susceptible to contamination from researcher bias, but this researcher did not to bring biases into the research and analyses processes and took into account a variety of factors that interrelate in the process of implementation so that findings are accurate and useful for not only TMECHS, but ECHSI and T-STEM stakeholders now and in the future.

Difficult to realize is bold, comprehensive school reform like that which drives a T-STEM early college high school, yet today, as in the past, bold reform efforts have the potential to transform classrooms into places that better educate and better prepare students to not only be competitive in an advancing global environment, but live satisfying lives as well. Educators must be diligent to engage participants in the

implementation process in sound and feasible missions that address current needs and future goals. In-depth discussions of a merger between T-STEM and ECHSI, related aspects of the education system, and the complexities of implementation will provide some of the basis for analyses of data collected in an evaluation of policy formulation and implementation. Analyses may reveal whether TMECHS is implementing policy based on initiative guidelines with sound, yet flexible decision-making processes and practices. Although TMECHS has been in operation for fewer than two years as this dissertation is written, the school may already be exhibiting signs of successful program development and implementation, of strength of commitment, and of the promise that only truly collaborative efforts of dedicated professionals can ensure.

HISTORICAL CHARACTERIZATION OF EDUCATIONAL REFORM EFFORTS

As a starting point for categorization, reviews of great changes that have taken place with regard to the American public school system since the mid-19th century are referenced. Changes occurred "in the political economy, in the scope and purposes of the high school, in the clientele it has served, in the complexity of its bureaucratic structure and in its relation to opportunity in adult life" (Tyack and Cuban, 2005, p. 53). In the decade and one half that children have been in school, educators have interpreted change and its implications on society, individuals, and schools. Interpretation has influenced policy talk which has at times appeared to cycle, yet it is not that simple. Institutional and social contexts change; different cases result and gradual but powerful trends may be steadier than discourse of specific reform eras.

Policy cycles and institutional trends must be understood in relation to each other; just as schools throughout history have changed, trends may be interpreted as

evidence that history has not repeated itself. When familiar themes return in reform discourse, school contexts are different. Today, ECHSI and T-STEM reform goals incorporate intent to serve both society and the individual in a contemporary context. How that context on a large scale, as well as at the school level, influences the implementation of policy will thus be incorporated into analyses of qualitative data collected.

Scholars have disputed outcomes and implications of reform in secondary education despite recurring themes (Redefer, 1950, p. 33). Labaree proposed that these disputes were often fueled by tension between two competing elements of American ideology, a goal to elevate liberty and promote free markets versus another to elevate equality and promote participation (in Tyack and Cuban, 1995, p. 54). Democratic politics encourage open access and adaptation, while capitalist market ideology stresses competition. The result has been an enduring but unsatisfactory compromise, open access in exchange for differentiated instruction (p. 54). Tyack and Cuban argue that these two “apparently contradictory notions” about school reform are in reality consistent; that in fact, steady evolution, while cyclical in nature, still represents progress (1995, p. 40). The ECHSI reform efforts to align and merge high school and college coupled with T-STEM goals and mission also merges these two apparently contradictory notions and their merger is in many respects a culmination of educational reform to date.

Outcomes and repercussions of trends in educational reform often take time to be revealed. Historically, most of the major trends have been interpreted as gradual and linear. Improvement is often revealed because of substantial evidence, evidence that

only becomes apparent when associated with a trend that endures. As an example, Tyack and Cuban (1995) cite the accomplishments of Administrative Progressives: “rising enrollment and graduation rates, longer school terms, larger school districts and school buildings, steadily growing per-pupil expenditures, and increasing differentiation of curriculum, programs, and school structures” (p. 40). When trends are efficiently and accurately implemented, they often endure, enabling outcomes to become widespread and persevere. Across the nation, ECHSI is less than eight years old, having opened its first early college high school in 2002, and in El Paso is less than five years old (ECHSI website). Texas Governor Rick Perry established the T-STEM initiative in 2005. T-STEM academies are partially funded and overseen by the Texas High Schools Project, an organization that began operations in 2003. (*Texas High School Project*, 2004-2010). How well these initiatives, particularly in a merged design, will endure is yet to be seen.

Tyack and Cuban (1995) also suggest that talk about policy cycles more than educational practices do (p. 40). Those who generate widespread, influential policy talk propose diagnoses; therefore define problems, and ultimately advocate solutions. Policy action then is the adoption of reforms, often ensured by federal and state legislation and school board regulations. Implementation, putting plans for change into practice, is often the stage that is not only more complex, but slower compared to its precursors. The stages of reform should be analyzed separately to investigate what has changed and how it has changed, while revealing what has stayed the same. This study investigated the important stages of process design and its implementation when reform policy is translated into practice.

Perhaps the most pervasive constant revealed in the history of American educational reform is that people have consistently criticized and attempted to improve public education. How and why policy talk cycles can be explained as “an inevitable result of conflicts and values and interests built into a democratic system of school governance...reflecting changing climates of public opinion” (Tyack and Cuban, 1995, p. 41). Policy elites are able to influence widespread educational reform when concerns about both society and the efficacy of the education system accumulate (p. 41). ECHSI and T-STEM are recent responses to concerns that high school curriculum and delivery are not adequate or rigorous enough.

Fueling the power of policy elites has been the personal experiences, aspirations, and anxieties of members of society during particularly prominent political, sociological, and economically charged times. This phenomenon results in different purposes being considered of greater importance at different times in history. While there has also always been conflicting ideals with regard to goals, ultimately, because consensus on specifically what is wrong and specifically how to fix it is difficult, if not impossible to reach, policy talk continues to change and evolve and that policy talk is further translated when specific policies are developed and implemented in local contexts. The varied and often contradictory purposes that Americans have expected from their public schools include:

- socializing children to be obedient, yet teaching them to be critical thinkers;
- passing on the best academic knowledge that the past has to offer, yet also teaching marketable and practical skills;

- cultivating cooperation, yet teaching students to compete with one another in school and later in life;
- stressing basic skills but also encouraging creativity and higher-order thinking;
- focusing on academic 'basics' yet permitting a wide range of courses.

(Tyack and Cuban, 1995, p. 43)

In an increasingly competitive and technological global environment, the two initiatives, T-STEM and ECHSI, are designed to teach students that may otherwise miss out on learning the life skills that are needed in today's technologically advanced global society.

Another explanation of policy shifts is by Arthur M. Schlesinger, Jr., who proposed that government cycles between conservatively and liberally dictated reform and trends. The 1890s, 1950s, and 1980s have been characterized as politically conservative, represented by policy talk of "a struggle for national survival in international competition, with the Germans during the 1890s, the Soviets during the 1950s, and the Japanese during the 1980s" (Tyack and Cuban, 1995, p. 45). In these eras, policy elites wanted to challenge the talented, stress the academic basics, and press for greater coherence and discipline in education. The 1930s and 1960s have been conversely represented by an "ideology of access and equality" (p. 45). Labaree corroborates the idea that there has been continuing tension between two competing elements of American ideology, one that "elevates liberty and promotes free markets" and the other that "elevates equality and promotes participatory politics" (p. 54). The enduring but unsatisfactory compromise in school trends, he writes, has been "a simple exchange – open access in return for differentiated instruction" (p. 54). Today,

opportunities for access and excellence for all is widely accepted as serving individual and societal needs.

Taking evidence of ideological government cycles into account, still and all, leaders of the Democratic and Republican parties have tended to agree with regard to views on education. Educational policies of Republicans and Democrats have both led and followed public opinion, with party lines rarely conflicting very much in any specific time period. What political leaders have agreed about most has been what was wrong with American public education and in a general sense what to do about it. This ability to agree, to consistently strive to achieve consensus as historically significant and cite examples as far back as decisions made during the mid-nineteenth century about the development of the common school and agreements among elite reformers during the Progressive era of the late nineteenth century.

Classification of reform periods has proven difficult; a major reason has been that the impact of reforms is often delayed across time. In addition to the passing of time, changing political climates change reform initiatives and associated policy, which can then alter the purity of policy intent and thus the nature and impact of a reform and its intent, as well as its implementation and support for that implementation. This has been characterized as politics of reform. Tyack and Cuban (1995) offer an example in “the implementation of innovative curricula in science and mathematics triggered in the Eisenhower years by the fear that the United States was falling behind the Soviet Union in training scientists and engineers” (p. 47). The era, the 1960s, in which this innovative curricula, based on policy that sprang out of the 1950s was to be developed, would also be an era when “policy talk and public attention shifted to assisting the ‘disadvantaged’

and achieving social justice for dispossessed groups" (p. 47). Two seemingly contradictory initiatives competed for federal funding and a place in the public schools. This inner battle, based on democratic principles is all too familiar in an American history of educational reform, access and excellence equally weighted as priorities for the public school systems. ECHSI and T-STEM are no strangers to this inner battle, as evidenced in this study.

Institutional developments also wield politics of their own, an internal dynamic that may only be loosely connected with educational reform periods in which attention has been intense and widespread (Tyack and Cuban, 1995, p. 47). While "policy talk does illuminate the concerns and hopes of policy elites and citizens as the schools and society change", we should not "underestimate ...gradual and evolutionary change" (p. 47), that occurs for a variety of reasons within the immense bureaucracy that is the public school system in the United States. ECHSI and T-STEM are not only overseen by public school districts and their associated state and local agencies, they are also guided by and responsible to institutions of higher education and the agencies they answer to, grant funding organizations, and the community itself.

In support of the idea that there are a variety of factors surrounding and within the immense bureaucracies that are the American public school system and higher education system, and offering some reasons for the perpetuation of bureaucratic management of educational systems and their reform, Urban and Wagoner (2009) have discussed reform movements as Political (p. 224) and Progressive (p. 226). These authors describe enormous changes that took place in the American political economy in the twentieth century, in the scope and purposes of high schools, in the clientele they

served, in their progressively more complex bureaucratic structures, and in the nature of their relationships to opportunities in adulthood. Looking at this same time period, numerous reformers have sought to interpret the educational implications of changes in society and schools. At times that policy talk seemed to cycle and institutional and social contexts changed as well, institutional trends assumed great power because of their steady nature, steadier Urban and Wagoner caution than the actual discourses that “punctuated...reform periods” (Tyack and Cuban, 1995, p. 53). Today, in a context more complex than ever before, local development and implementation of reform initiatives are influenced and even bound by scope and purpose, clientele served, and complex bureaucratic structures; the early college high school initiative coupled with T-STEM goals is no exception.

Public school reform over time has been described as “neither as an ineluctable evolution – progressive or otherwise – nor as a set of fitful repetitions” (Tyack and Cuban, 1995, p. 58). Rather, they proposed that it is in its entirety “an interaction of long-term institutional trends, transitions in society, and policy talk” (p. 58). Cycles represent recurring priorities and messages, even when the messages bear new labels and descriptors. In a general sense, on the one hand, “cycles of policy talk...are not futile or irrational, even though they may seem so to teachers inundated by frequent waves of reform or to people who believe that they have the definitive answer to school problems” (p. 59). Conversely, “significant segments of the democratic polity have not been heard in the process, and sometimes even teachers were barely consulted about the changes that they were expected to bring about” (p. 59). Finally, what has not been on reform agendas has often been as important as what was debated. This wisdom

helped guide the development of research questions and analyses the implementation of a policy that reorganizes the institutions of high school and college was investigated.

Déjà vu with regard to reform initiatives is often not only familiar, but annoying to educators and innovators who may or may not understand the variety of reasons previous or current reform efforts have not produced desired or anticipated results. The circumstances that affect the efficiency, accuracy, comprehensiveness, and perseverance of policy implementation will be discussed in an upcoming section of this literature review and were addressed in this study.

FOCUSING REFORM ON SECONDARY EDUCATION HISTORICALLY

While a T-STEM early college high school represents a reform that merges secondary and higher education, its students are still in high school and therefore, this literature review focuses reform on secondary education. Early college high schools diverge from today's traditional high school in that a key component of their design is the small learning community setup that seeks to mediate the difficulties inherent in the large comprehensive high school while still endeavoring to offer both access and excellence. Still, it is notable to take a moment and address the development of the traditional high schools that have become cultural icons in American society today as some of their perceived shortcomings prompted the educational reforms that provide the foundation for a T-STEM early college high school. The absence of traditional high school culture can also impact student engagement as students may feel they are missing out on the comprehensive environment of traditional high schools and elements associated with aspects such as team sports and school size.

Tyack and Cuban (2005) wrote that "statistics on high schools over the last century reveal striking trends" (p. 47) and propose that the most significant of these trends is "the rapid increase of students enrolling [in] and graduating" from secondary education (p. 48). This trend, the authors propose "differentiates secondary schooling in the United States from that in other industrialized nations" (p. 48). Evidence is revealed in the following statistical comparisons with regard to secondary school enrollment over time.

- 1900: one in ten students aged fourteen to seventeen enrolled in high schools;
- 1940: seven in ten students aged fourteen to seventeen enrolled in high schools;
- 1980: nine in ten students aged fourteen to seventeen enrolled in high schools.

(National Center for Education Statistics, 1993, p. 55)

Statistics also reveal a marked increase in the percentage of enrolled students who graduated from high school.

- 1900: 8 percent;
- 1920: 17 percent;
- 1940: 51 percent;
- 1960: 69 percent;
- 1980: 71 percent. (National Center for Education Statistics, 1993, p. 55)

With larger and larger student bodies, structure and curriculum changed and was expanded. Hampel described the progression in secondary education as evolving from a cursory extension of grade schools designed to serve a few to a complex institution designed to serve many (1986):

In 1900, outside large cities, high schools were generally small; one third of high school students had only one to three teachers, and two-thirds had one to ten teachers. Such small staffs could offer only a small set of courses.

Sometimes what was called a 'high school' was just another room added to a graded elementary school. By 1950 such modest institutions would have seemed as antique as the one-room country school. Over the years, as new functions appeared and became institutionalized, high schools grew much larger and more differentiated. They had administrative offices, secretaries, workshops and kitchens, nurses' rooms, gymnasiums, cafeterias, auditoriums, counseling offices, and athletic fields (where, in the eyes of many students, the most important work of the school took place). (Tyack and Cuban, 1995, p. 48)

Such enlarged secondary schools offered a constantly expanding range of courses aimed at different groups of students. These courses were typically grouped into tracks, most commonly called college, commercial, vocational, and general. The percent of students taking academic subjects dropped in certain fields, such as Latin, German, foreign languages, algebra, and physics. Likewise, students in non-college tracks were often offered watered-down "general mathematics" and "general science" instead of traditional academic courses. Schools added new fields, physical education in particular, required for all students. Enrollments rose sharply in the newer practical subjects, such as typing, industrial arts, and home economics. Especially during the 1960s, schools created large numbers of electives that substituted for regular sequences in fields such as English and social studies. Most statistics on enrollments actually

underestimate the degree of differentiation, for the labels used are somewhat arbitrary and do not include a wide range of subjects. In 1890 the federal government gathered statistics on secondary course enrollments under just 9 headings, but in 1928 it listed 47. In 1973 high school principals reported over 2,100 names for courses, including such tempting subjects as 'terminal mathematics'. (Tyack and Cuban, 1995, p. 48)

An investigation of economic, demographic, and attitudinal trends in American society illuminates in part why high schools in the United States could enroll more and more students as the twentieth century unfolded. Creating and supporting the operation of secondary schools is costly; providing means, the gross national product of the United States consistently rose during the century. With financing to expand and an ever increasing urban population targeted for educational services, schools not only grew in size, but were also able to differentiate instruction. In addition, birth rates stayed low until the baby boom following World War II and because of this parents increasingly supported their children for more years in school. Children could stay in school and not leave to find work to help support their families because on the one hand families were relatively small and on the other hand, the need for teenagers to work full time diminished. With the developments of child labor laws and compulsory attendance legislation, children formerly required as members of the working class were expected to attend school (Tyack and Cuban, 1995). In addition, as the century unfolded, "increasingly, parents and teenagers came to believe that secondary school counted in getting a good job" (p. 49). In 1972 George Gallup asked parents an open-ended question about why they wanted their children to be educated. The top-ranked reply

was “to get better jobs,” and the third-ranked answer was “to make more money” (p. 49).

Since the mid-nineteenth century, because of broad institutional and societal trends and debate over the appropriate functions and character of high schools, educators have never lacked advice from those who would presume to counsel them on how to do their jobs better. Advice has come from scholars, businessmen, experts in a variety of fields, and from the general population. A review of history reveals that major trends have influenced an expansion of access and an increasing differentiation of programs and courses. Policy talk has served to frame reform efforts within the contexts of time periods; policies were developed, and amended or sustained for a variety of reasons. Literature shows that while Americans have depended on secondary education when economic, social, and political problems became difficult, they did not always agree on the action that needed to be taken in the schools (Kliebard, 1986).

While ECHSI and T-STEM are both less than a decade old, they share principles and intent to restructure secondary schools, on the one hand to enable access and excellence to those traditionally underserved, and on the other to provide models for other schools to restructure or develop new programs. This study shows that in the design process of these reforms, the perspectives and decisions of partners impacted the specification of policy and its implementation.

POLITICS OF REFORM AND IMPLEMENTATION

ECHSI and T-STEM reform is politically charged both within implementation and because of scrutiny by stakeholders. Funding organizations and partners expect schools to fulfill policy objectives, prove credibility, and maintain financial resources (Ricks, 2009, par. 2). In a speech on July 13, 2009 at the Henderson County Republican Headquarters in Athens, Texas, United States Senator Kay Bailey Hutchison remarked that she supported school districts in the creation of early college high school programs because the programs would provide incentives for students to stay in high school and earn diplomas (par. 2). But does the initiative reach enough students to justify its costs? The ECHSI initiative is said to be different from Dual Credit, Advanced Placement, and other pre-college programs because of “the reach and coherence of the blended academic program and a relentless focus on underrepresented students” (Overview & FAQ, 2009, The Design par. 4), but with the small size of early college high schools how many students are motivated to stay in school? And in the small school settings, depending on how the selection process is designed, do all enrolled students benefit from the new school structure and organization and are students who may be a better fit excluded?

Because early college high schools are largely funded by school districts, they are public secondary schools. Studies have been done to analyze budgets and costs associated with their operations. Findings from studies conducted suggest that costs for fully implemented early college high schools are higher than those of regular public high schools (Webb, 2004). On the other hand studies on return on investment have already showed that families, communities, and states realize significant benefits because of

early college high schools in the form of greater high school and college completions rates (Augenblick, Palaich, & Associates, Inc., 2006). The Bill & Melinda Gates Foundation, Carnegie Corporation of New York, the Ford Foundation, the W.K. Kellogg Foundation, and several other foundations provide start-up funding for schools, in addition to guidance with regard to policy. Even though the resources from these foundations often act as catalysts for additional funding, they are small when compared to the funding needed to operate the schools on daily basis. Evaluators have suggested that "the diversity among early college high school sites presents a challenge to understanding overall financial implications" and that "the blending of secondary and postsecondary resources further complicates cost calculations" (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. x). While this area will not be specifically addressed in my study, it is an area that begs further study and "an important activity of the Early College High School Initiative is to collect data that lead to financial planning models for sustainability and replication" (p. x).

With regard to policy goals, a consideration is whether processes and implementation actually achieve those goals. Are there difficulties in practice when merging the requirements and curriculums of college, high school, and a T-STEM focus, as is the case with TMECHS, for instance with regard to college readiness standards and the accumulation of credits? Should students be selected or should access be in all manners open? Authors of an article in *All Academic Research* cite reasons that students fail to go on to college that include inadequate K-12 preparation for college and lack of financial support. ECHSI attempts to mediate these issues by "shortening the number of years it takes for a student to earn a college degree, removing financial

barriers, and offering academic and personal counseling and support” (Greene, 2003, par. 1). Earning high school and college credit concurrently is meant to “create a seamless education system” (par. 1) that encourages and supports academic success in rigorous coursework for the struggling student.

Early results of research studies on early college high schools refer to the importance of aspects of “the exchange of roles and responsibilities for members of each partner group”, such as university professors learning about the culture and language of the public school system and secondary school personnel navigating the university with its norms and requirements. Major and minor issues relative to the merging of high school and college have to do with conflicting calendars, the completion of credit hours within optimal time frames, and course content of dual credit classes (Greene, 2003, par. 1).

Politics are present in the roll out of the new T-STEM initiative as 46 academies have opened across Texas since 2005 under the auspices of the Texas High School Project. Texas Governor Perry commented in October 2009 that T-STEM academies have successfully provided the resources students need to succeed in an increasingly competitive global economy. Speaking at a high school, the Governor said, “Accelerating the pace of our high-tech education is essential to maintaining a globally competitive workforce. This will continue to provide Texas students the opportunity to pursue the education they need as they fulfill their potential and keep Texas moving into the future.” Citing nearly 90 percent of T-STEM academies exemplary or recognized, with all meeting state standards, the Governor proposed at this venue to double the number of T-STEM academies from 46 to 92 while varying the focus at the different

schools to provide opportunities in biomedical fields and teaching. In order to achieve this, the governor also proposed a \$100 million T-STEM Challenge Scholarship for students at universities, community colleges and technical colleges pursuing degrees and certifications in the science, technology, engineering, math or medical fields. Scholarships he said would be designed to “promote innovative approaches to recruiting, retaining and graduating students in T-STEM disciplines, and emphasize partnerships between higher education institutions, industry partners and T-STEM education programs” (Texas to invest \$160 million in T-STEM academies, 16 October, 2009). The Governor closed out his speech with the idea that T-STEM academies are playing a part in developing Texas’ workforce and ensuring Texas’ future prosperity. The governor promised to work with lawmakers to further implement the initiative and secure additional funding (Texas to invest \$160 million in T-STEM academies, 16 October, 2009).

Further insight into the politics within the implementation of reform policy can be found in an article in *New Directions in Education Policy Implementation*, edited by Honig (2006). Stone (1980) characterized policy implementation as “a reckoning stage” (p. 2), in which “social conflicts not fully recognized or effectively resolved during the initial adoption phase of the policy-making process resurface” (Malen, 2006 in M. I. Honig, 2006, p. 83). In these stages of implementation, value-laden issues that cannot be “resolved solely through the acquisition of empirical evidence or the application of technical expertise” are subject to “political bargaining and maneuvering” as “governing bodies, supervisors, and service providers anticipate and react to the diverse preferences of other influential players and to the contextual exigencies that condition

what these various clusters of actors may be willing and able to do" (Malen, 2006, in Honig, 2006, p. 83). Actors implicitly and explicitly "negotiate the purposes and parameters of policy" and therefore influence "the extent to which policy may be broadly and faithfully implemented, or, routinely and strategically ignored, deflected, altered, or overturned" (p. 83). Rational deliberations and unanimous agreements can be altered in implementation by political processes because actors and groups exert more power and influence than policy itself (Cuban, 1990; Levin, 2001; Murphy, 1971; Stone, et. al., 2001; Weiler, 1993).

Malen characterizes politics as "an ever-present, at times, pervasive force that can shape both the adoption and the implementation of education policy in vastly different but decisive ways (Malen, 2006, in Honig, 2006, p. 84). Context shapes political dynamics and administrators and staff influence implementation (p. 86). Each actor in the implementation process has unique resources and policy currencies, in addition to his or her own skill and will to fulfill policy objectives or influence the modification of those objectives (p. 88). Policy implementation is a political phenomenon, replete with complexities and uncertainties. Malen (2006) concludes her discussion by suggesting that "combinations of contests, contingencies, and disruptions...cannot be fully anticipated let alone readily controlled" (p. 101). Educators are cautioned that "exhaustion, frustration, disillusionment, and alienation" are at times the results of well-intentioned but ill-conceived educational reform policies (Malen, 2006 in Honig, 2006, p. 101). Ultimately, educators need to appreciate how complex, iterative, and uncertain policy implementation is in order to maximize the positive and minimize the unforeseen.

POLICY IMPLEMENTATION

Qualitative research can provide insight into how policy is translated in implementation, in the case of this study, how local partners from independent school districts and the El Paso Community College designed and implemented T-STEM ECHSI processes. Like other reform initiatives, early college high school reform coupled with T-STEM academy principles is based on core values and criteria, but individually, schools are designed, organized, and run based on the discussions, decisions, and perhaps even negotiations of these administrators; and pursuant to federal and state public school requirements and independent school district policies. Policies are bound and mediated by organizational constraints and a variety of reflective decisions. Processes are led, facilitated, and regulated by individuals in positions of authority. Political processes and interrelationships among actors, including staff, faculty, and students, and context influence implementation.

Implementation research can help answer questions of why certain reform efforts persevere or even break new ground. While history can provide many of the answers as to what initiatives get implemented and why they are supported, what happens throughout implementation is also influenced by many factors, both external and internal. Understanding implementation requires investigation into the institutional character of schools. This type of insight is crucial for an evaluation of the implementation of policy for early college high schools and T-STEM academies, which, in the case of TMECHS, is a collaborative effort among a secondary school, an institution of higher education, and grant funding agencies. Because TMECHS is an early college high school, not only is an accurate understanding of one institution

required by administrators and staff, but an understanding of two very distinct and historically separate types of schools is necessary because the missions and offerings of institutions that have historically served two distinct student bodies, children and adults, are merged.

In a research study of large-scale education reform that focuses on program adoption, design, and implementation, some reform evaluators would measure “the extent to which each component of the reform model is used”, for example, “management techniques, reorganization, parent involvement, teacher collaboration, and decision making” (Desimone, 2002, p 437). Changes may have been directed for classroom teaching, including the content covered, instructional strategies, and assessment methods. Studying implementation then can mean “measuring the extent to which a school is adhering to a particular design” (p. 437). In early college high school reform decisions made and policy set are guided by a grand design already placed on the local partnerships.

Issues surrounding implementation may have in some way been due to decisions made by administrators. Some changes in education systems are major and others are minor. Some take hold in relative silence, while others become widespread and ultimately taken for granted and forgotten as reforms at all. Other reforms are only symbolically implemented. At times when reformers have spoken, few educators have heeded their words or acted upon them. Tyack and Cuban referenced “the widespread adoption of coeducation in the first half of the nineteenth century” when describing a reform effort which “illustrates a major transformation that took place without much debate or even notice – in effect, a silent revolution” (1995, p. 54). The opposite

phenomenon, when changes take hold rapidly is evidenced by vocational education in the 1920s or special education in the 1970s (p. 54). The early college high school initiative has taken hold across the nation and the T-STEM initiative is quickly taking hold across the State of Texas, with external guidance and funding provided by private organizations and with the support of state and federal agencies, yet individual school designs differ based on the partnerships that have been formed at the local level.

Because the early college high school and T-STEM initiatives have considerable support from private organizations and are aligned with popular political ideologies such as college readiness, access, and excellence, perhaps they will become so pervasive that they were no longer seen as reforms. Early college high schools and T-STEM academies are perhaps likely to persist because they have the support of influential constituencies. On the other hand, because as in the case of TMECHS and other T-STEM academies, the early college high school initiative that merges high school and college has been merged yet again with the additional criteria of the T-STEM initiative, the policy that encompasses both of these young reform efforts are vulnerable, especially if implementation is not carried out efficiently and effectively, taking into account external and internal factors. It may be that some of the policy stipulations can and should be amended based on actual experience in the schools; this research effort perhaps shows just that.

Across the country, American public schools are diverse, which can help explain uneven penetration of reforms. Historically though “policy talk about educational reform sometimes conveniently neglects variability” (Tyack and Cuban, 1995, p. 56). For example, the use of films and radio in the classrooms was encouraged in the 1930s,

even though most rural schools did not have electricity to enable their use. Some of the factors that influence or determine how a reform effort is implemented or how successfully that reform is implemented include where a school is located, whether a school district is in an urban or rural area, how wealthy a school district is, and what the demographics of a community are (p. 56).

Reforms persist when they are required by law and monitored, still legal mandates cannot guarantee how policy is implemented and in some cases laws can be discreetly ignored. Those who make laws recognize that provisions for enforcement and the allocation of funding are necessary for programs to be created and sustained. Still, funding is often too little and enforcement designs may influence unintended results. In vocational education, for example, "both federal and state agencies issued quite specific rules and checked on compliance before re-funding programs" (Tyack and Cuban, 1995, p. 57). Educators have had to transform themselves into effective lobbyists, persuading legislators or state officials to support reforms by enacting laws.

Some scholars assess the impact on schools of proposals for reform, while others address the idea that schools themselves change reforms. Cremin and Cuban explained the ultimate goal of any educational reform effort as "improving teaching and learning", often planned "through the introduction and spread of potentially powerful external reform ideas" (p. 60). Reforms do not always turn out as intended or planned and at times they succeed in some locations and not in others. Several authors, such as Bauman, Stein, Ireys, Berman, McLaughlin, and Elmore, have remarked that "educators have long noted how difficult it is to spread reform ideas consistently and reliably across schools or districts" (Supovitz & Weinbaum eds., 2008, p. 1). Others have proposed that

there are two alternative reasons for disappointing experiences and results, those being poor program conceptualization or improper execution in the local site (p. 1). This study of an early college high school investigated program conceptualization and execution. Both factors have to do with what happens when externally designed reforms enter arenas exclusive to individual schools, from administration to school environments. Questions addressed how the implementation process unfolded and how policies were carried out based on policy guidelines and federal, state, and local regulations.

The implementation process has historically received less scrutiny than its complexity merits because it has been considered the means to an end comprised of straightforward acts of carrying out or completing plans or orders. Supovitz and Weinbaum (2008) proposed that research on program and policy enactment is usually focused more on goals than on what happens in order to achieve those goals. As a result, researchers have paid less attention to the implementation process as opposed to outcomes. In a study that investigates local policy development, trends such as these are reviewed.

Further supporting the rationale for this study that looks at the setting of specific policy is advice that today the stakes are enormous for developing and implementing reliable educational reforms. A strong education system is crucial for a nation to be able to compete in a global economy. The American education system is perceived to be "troubled and uneven at best" (Supovitz and Weinbaum, 2008, p. 1). Public schools are accountable for student performance and the federal government has invested considerable amounts of money in instructional interventions with the hope that they will

be replicated and will spread. Early college high schools and T-STEM academies do not only rely on government funding, but on private financial support as well.

Some recent reform initiatives have been designed to enforce and sustain stated goals and strategies and include the National Science Foundation and National Institutes of Health created by the U.S. Department of Education. These organizations sponsor efficacy trials to determine whether interventions are well designed and replicable. Their ultimate goal is to develop a "What Works Clearinghouse" with specifics about reliable programs that other schools can model their own programs after (Supovitz and Weinbaum, 2008, p. 1).

Focusing a discussion of implementation on the impact of decisions and decision-making process based on external reform initiatives, "high schools are under intense pressure to change the ways in which students are educated" (Supovitz & Weinbaum, 2008, p. 46). Pressure to create and implement more effective programs force schools and districts to seek assistance from external school reform organizations. Again directly supporting a study that investigates how decisions are made regarding local policy is these authors' suggestion that, "In order to achieve the kinds of results intended with these substantial investments of public and private resources, there is a critical need to understand external reform designs and how they are implemented in schools and districts" (p. 46). Educators are cautioned not to underestimate "the co-constructed nature of the implementation process" (p. 46), as various factors interact with one another. This advice influenced the design of the study described in this dissertation.

Implementation has been described as an adaptation process. Research on five school designs revealed that design characteristics can channel interaction among designs and dialogues can be influenced by decisions made with regard to design emphasis, level of complexity posed to enacting teachers and administrators, strategies for engagement, and implementation supports. Supovitz & Weinbaum (2008) suggest that when design components central to reform goals are introduced early in implementation they are more likely to be enacted in a manner consistent with design intent (p. 65). Educators should strategically select what is emphasized early in implementation, understanding that funding and district attention may shift over time to other priorities.

Design components can impact how teachers and administrators implement reform. There are ranges of possible interpretations that can be made by educational professionals and because implementation requires technical skill by teachers and administrators, difficulties arise as structure is formulated and put into practice. Those who develop policy should bear in mind that when difficulties arise in practice, teachers and administrators tend to modify or ignore aspects of design (Supovitz and Weinbaum, 2008, p. 65). Adequate implementation support can mediate these types of issues regarding the application of complex components of an educational plan so that less deviation from intent results.

The degree of specificity incorporated into policy impacts implementation as design factors interact with one other. Greater specificity in policy explanation provides administrators with clearer understandings of what implementation should look like. What is emphasized, complexity, strategies, and support all impact whether design

modifications. In research by Shiffman, Riggan, Massell, Goldwasser, and Anderson on five school designs, designs were shown to “vary in the degree to which they accommodate, encourage, or invite reinterpretation by schools and districts” (Supovitz and Weinbaum, 2008, p. 66). Policy makers can employ a number of different strategies to encourage minimal adaptation or modification in implementation. Still policy is often developed without the application of these strategies.

Spillane, Reiser, and Gomez (2006) discuss the importance of the concept of actors’ understanding of expectations with regard to policy implementation. In an explanation of the importance of cognition, the authors proposed that it is “not simply *that* implementing agents choose to respond to policy but also *what* they understand themselves to be responding to” (p. 49). Administrators and staff interpret new information based on what they already understand. Lack of knowledge can interfere with understanding and human nature sometimes hinders the ability to restructure existing knowledge. In addition, lack of knowledge, experience, and expertise influences a superficial understanding of policy and associated tasks.

Spillane, Reiser, and Gomez (2006) propose that ultimately, interactions among actors define “what is understood from and about policy” (in Honig, 2006, p. 63). Even in the most complex reform, “policy attempts to prescribe particular ways of responding to...situations” (p. 63). In implementation administrators and staff are provided with artifacts to help them understand policy intent and the tasks at hand. These artifacts include curriculum guidelines, leadership and teaching strategies via professional development, and standard documents as guidelines. How actors make sense of the

artifacts, their experiences, and their interactions can challenge them, their colleagues, and reform efforts.

In a discussion of the complexity of policy implementation, Honig writes that “education policy implementation as a field of research and practice for decades has amounted to a sort of national search for two types of policies: ‘implementable’ policies – those that in practice resemble policy designs – and ‘successful’ policies – those that produce demonstrable improvements in students’ school performance” (Honig, M. I., 2006, in M. I. Honig (Ed.), 2006, p. 1). Honig (2006) counsels readers that “implementation research should aim to reveal the policies, people, and places that shape how implementation unfolds and provide robust, grounded explanations for how interactions among them help to explain implementation outcomes” (p. 2). She writes that “the essential implementation question” should be “what is implementable and what works for whom, where, when, and why?” (p. 2). Honig also proposes that “recent trends in education policy signal the importance of reexamining what we know about what gets implemented and what works” (p. 1) because “education policy demands...have become more complex” (p. 1). ECHSI is representative of a complex policy in that it merges high school and college. Adding a STEM focus further complicates design and implementation.

A T-STEM early college high school is an example of a hybrid organization that attempts to “surround teaching and learning with other resources that enable success for...students regardless of their personal backgrounds” (McLaughlin, 2006, in Tyack and Cuban, 1995, p. 223) and merge distinctly different educational institutions. McLaughlin writes that “while early evidence suggests the promise of these

organizational hybrids, little is known about how these institutional mergers have worked in fact" (p. 223). Concerns include "how partners manage issues of accountability, normative compatibility, logics for action, and day-to-day operation" (p. 223). Each of these concerns is appropriate for an implementation evaluation. Logics for action and day-to-day operation are two of these concerns that were addressed in this study.

THE P-20 CONCEPT OF EDUCATION

In today's global and technologically advancing society, each and every student's ability to continue his or her education after high school becomes more important as time goes by. Introduced in the introduction to this paper, the goal of P-16 and P-20 systems is to create a system of education that "links and coordinates each education level into a seamless system fundamentally guided by the principle that success in college begins in prekindergarten" (*ABCs of Investing in Student Performance*, 1996). P-20 systems attempt to guide students not only through a post-secondary associates or bachelors degree, but on to graduate school as well.

The development of P-16 and P-20 education models began because of a perception that there was a pervasive lack of coherence and alignment within the public education system in the United States from preschool through college. Characterized as a vacuum, it has been described as being found throughout our education system. According to the Education Commission of the States' report *ABCs of Investing in Student Performance*, "children who attend a quality preschool program experience higher rates of graduation and enrollment in postsecondary institutions" (1996). A

coordinated effort to link preschool instruction to elementary school instruction to middle school instruction to high school instruction is needed to rectify the problems that become evident when students do not finish high school and move on for degrees in higher education. The U.S. Department of Education's *Mathematics Equals Opportunity* reported that students who take rigorous mathematics and science courses in middle school are much more likely to go to college than those who do not; however, college-preparation programs usually do not begin until 9th grade (1997).

Across the United States, students who have recently graduated high school have had to take remedial courses in math, language, and science as they entered college or university. There has been so much remedial coursework taken by recent high school graduates in postsecondary institutions across the country that it is perceived as a trend, a trend that is not only disturbing in light of the misalignment, but expensive for individual states and individual students.

Placement tests gauge whether students are college ready. Michael Kirst noted that admissions-related tests and decisions are like a maze for students with as many as 75 placement tests and more than 125 combinations of these exams in play across the nation (Kirst, 2000). Placement tests are just one issue that is being addressed in several states via interagency collaboration.

Ultimately, the goal of P-16 or P-20 reform is to create "a single system of education underlying all of the segments" (Institute for Educational Leadership, 1999). To do this means the change the American education system so that its component

institutions are not acting independently and at cross-purposes from one another (Consortium for Policy Research in Education, June 2000).

P-16 and P-20 models are compatible with ECHSI and T-STEM academies principles. Evident in the missions of each of these initiatives is alignment between public school systems and higher education, the incorporation of rigor and high expectations, and a goal of better preparing students for the global, technologically advanced environment that is the world today.

TEXAS COLLEGE AND CAREER READINESS STANDARDS

Other initiatives that influence the alignment of all levels of public education with higher education are described as college and career readiness standards. In 2008, the Texas Commissioner of Higher Education issued a letter regarding the importance of implementing Texas College and Career Readiness Standards (CCRS), expressing the urgency for states to ensure that students graduate high school ready to enter and be successful in college. Dr. Paredes quotes the U.S. Department of Labor for supporting statistics, noting that an academic curriculum is required, and citing a need for a “seamless transition between high and college or the workforce” if schools are to “dramatically increase the levels of expectation and achievement” as they adopt CCRS (Texas Higher Education Coordinating Board, 2008, par.2). Finally, Dr. Paredes discusses how the collaboration between the Texas Higher Education Coordinating Board (THECB) and the Texas Education Agency (TEA) is instrumental in the implementation of CCRS (par. 3-4)

ECHSI and T-STEM conform to the framework of CCRS addressing the urgent mandates Dr. Paredes defines. As both initiatives address these concerns with policy and programming, the mission and goals of ECHSI and T-STEM are comprehensive and enthusiastic. And locally developed implementation and applications, such as TMECHS in El Paso, are guided by THECB and TEA requirements and legalities.

The public school partner in TMECHS is the El Paso Independent School (EPISD). EPISD has created a set of standards to promote the development of college and career readiness in all of its students. The district describes college and career readiness as “an entire educational system focused on the goal of ALL students graduating from high school fully prepared to participate in postsecondary education and the highly skilled workplace, an educational experience incorporating reading, comprehension, reasoning, problem solving and interpersonal skills preparing ALL students to be college ready; career ready; life ready” (*El Paso Independent School District*, 2010). Core values, the means to the end are incorporated in this definition:

- Focusing on the whole child
- Focusing on partnerships with community
- Focusing on continuous academic improvement, and customizing instruction and instructional opportunities. (*El Paso Independent School District*, 2010)

THE T-STEM INITIATIVE

The mission and goals of the T-STEM initiative is characterized as bold and forward-thinking. Designed to build on state and local efforts to improve mathematics and science achievement among all Texas students, the initiative focuses on increasing the number of students who study and enter science, technology, engineering, and

mathematics (STEM) careers. T-STEM approaches are described as proactive and strategic, designed to “empower Texas educators with the tools needed to transform teaching and learning methods for the new century, it hopes to “ensure that “all Texas students thrive in the 21st Century economy, that Texas will continue to grow its economy, land more economic development opportunities, and remain at the forefront in the battle for 21st Century jobs” (*Texas High School Project*, 2004-2010).

T-STEM initiative is based on the idea that in order for Americans to remain competitive the elements of STEM-related fields must be the cornerstones of student learning. And the idea that T-STEM builds on other efforts is key with regard to the idea that it has arranged for the marriage of its principles with those of ECHSI to help develop schools that not only incorporate STEM coursework and college preparation, but do so as students are accelerating their pathway to and through a college education.

Since its inception in 2005, the T-STEM initiative has created numerous institutions to facilitate and influence its goals in Texas. It has supported the creation of over 35 T-STEM Academies in areas of high need across the state, “each year producing 3,500 Texas high school graduates from diverse backgrounds, with the preparation to pursue study and careers in STEM-related fields” (*Texas High School Project*, 2004-2010). It has supported the creation of seven T-STEM Centers to facilitate the transformation of teaching methods, teacher preparation, and instruction in STEM fields. It coordinates a T-STEM network to “promote broad dissemination and adoption of promising practices from the initiative and to improve mathematics and science performance for students across Texas” (*Texas High School Project*, 2004-2010).

Programs have been designed and implemented in new schools to promote quality school leadership that can support school redesign efforts, quality teacher recruitment and improved teacher preparation (*Texas High School Project*, 2004-2010). In sum, T-STEM personnel are working to better the alignment of high school, postsecondary education, and economic development activities throughout the state of Texas.

Evaluation of the T-STEM Initiative

The types of projects that have been created and facilitated by the T-STEM initiative thus far include T-STEM Academies (demonstration schools and learning labs), T-STEM Centers (partnerships to create new STEM instructional materials and high quality professional development), an on-line network (professional development, exemplar profiles, and resources to enhance secondary school performance); and T-STEM Leadership such as the UTeach Institute, a nationally recognized mathematics and science teacher preparation program developed by The University of Texas at Austin (*Texas High School Project*, 2004-2010).

T-STEM academies and other initiatives are currently organized based on the T-STEM Academies Design Blueprint, written in 2006 by the Texas High Schools Project (THSP). It is described as having been “vetted by national experts in the fields of school and curriculum restructuring” and having been “used successfully by the T-STEM Academies opening in 2006-2007 and 2007-2008”. Still, as of the writing of this dissertation because of feedback received from the academies that were based on it, the Blueprint is currently being redesigned for “added clarity and ease of use” (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 10 October, 2009).

The Blueprint provides background information on the initiative, describes its purpose, and documents program requirements, benchmarks for evaluation, and indicators of efficacy and compliance with initiative missions and goals. There are eight benchmarks, each setting down comprehensive and often specific program requirements. Program requirements then are arranged into categories: Mission Driven Leadership, divided into sections for design and implementation, leadership, and student achievement; School Culture and Design, divided into personalization, culture, and postsecondary success; Student Outreach/Recruitment/Selection and Retention, divided into recruitment, open access, and student retention; Teacher-leader Selection, Development and Retention, divided into high qualified teachers, professional development, and teacher retention; Curriculum, divided into rigor and STEM curriculum; Instruction, divided into shared practices, STEM education integration, literacy plan, technology integration, and assessment; Strategic Alliances, divided into parent and/or family participation, business and school community, and institutions of higher education; and Academy Advancement and Sustainability, divided sustainability, strategic planning, and progress. (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 10 October, 2009).

Evaluations on T-STEM initiatives discussed on the Texas High School Project (THSP) web site document a considerable number of programs with promising statistics:

- 38 T-STEM Academies with over 8,500 students, many located in urban areas and along the Texas-Mexico border have enrolled 62% of students from

populations traditionally under-represented in higher education (Hispanic and African-American) and 53% of students served economically disadvantaged

- 8 new academies were slated to open in 2009-2010
- UTeach Institute replication sites thus far are located at the University of Houston, the University of North Texas, and the University of Texas at Dallas.
- Academies house competitive Robotics programs
- There are already 7 T-STEM Centers providing support to 2,713 teachers by way of 96 professional development sessions and 30 STEM articles.
- Over 1,686 visitors have registered with the T-STEM Network.
- Just between 2005 and 2008, over \$ 91,000,000 has been invested in T-STEM initiatives (*Texas Education Agency, 2010*)

DUAL CREDIT AND CONCURRENT ENROLLMENT

Some current programs linking secondary schools with two- and four-year institutions of higher education are characterized as college access programs, designed to allow students to participate in college-level courses for credit while they are still in high school. Because of admissions requirements and financial organizational restraints, these programs, such as dual credit and concurrent enrollment, have traditionally been available predominantly to high-achieving students. Disadvantaged and underrepresented students have thus not been able to take advantage of them in the same manner as their peers have.

Dual credit programs allow high school students to enroll in postsecondary education courses prior to receiving a high school diploma, while in concurrent

enrollment, students take college courses while still in high school, but only receive college credit (U.S. Department of Education Office of Vocational and Adult Education, 2005). For both of these programs, students must first satisfy placement and prerequisite criteria.

There are dual enrollment programs in all 50 states (U.S. Department of Education Office of Vocational and Adult Education, 2005). When a student satisfactorily completes a dual credit course, he or she earns both high school and college credit. Courses are taught by college credentialed high school faculty or by postsecondary faculty on a college campus. When access to institutions of higher education is limited, dual credit classes can be offered through distance learning, satellite campuses, or online courses. In some states, mandated dual credit programs are funded entirely or partially by the state. In other states, such as Texas, community colleges, for example, waive tuition for students still in high school so that qualified students can take advantage of the opportunity (U.S. Department of Education Office of Vocational and Adult Education, 2005).

ADVANCED PLACEMENT

Another example of a linkage between high schools and colleges is Advanced Placement (AP) classes. AP classes are taught in high schools by regular secondary education certified teachers trained in AP by the College Board and are designed to be more rigorous than regular high school classes in the same subject. At the end of a course, students take an examination that is aligned with college-level content and expectations. Depending on both the examination score received and on the college

that a student applies to, AP courses can satisfy college credit upon admission to college or university (CollegeBoard, 2008).

The College Board began administering the AP program in 1955. In 2008, the program consisted of 37 courses and associated examinations. 2.7 million tests were taken by 1.6 million students at over 17,000 high schools (College Board, 2008).

Although the AP program is still primarily taken advantage of by high achieving, traditional students, AP has grown considerably. In addition, in efforts to close gaps, school districts are instituting policies that allow more students access by subsidizing the cost of the exams and opening increasing numbers of AP classes (CollegeBoard, 2008).

COLLEGE ACCESS AND INITIATIVES TARGETING UNDERREPRESENTED STUDENTS

More and more college access programs are targeting underrepresented high school students and are using these programs to challenge students and provide pathways to postsecondary education and careers (Chao, 2008). These alternative education models, such as ECHSI schools incorporate dual credit and concurrent enrollment and are founded on the idea that high school students who might otherwise not have the opportunity, including former dropouts, low performers, or students lacking adequate high school credits, can earn a high school diploma while completing challenging college level work if provided appropriate support (Betheil, 2008).

In addition to support and sound school structure, key to success in programs such as ECHSI is student motivation. The coursework is challenging and while

students need the support of family and well-trained teachers to guide them, each student also needs to take responsibility for his or her own learning and progress.

A crucial difference exists between the setting of a comprehensive high school where much dual credit takes place and the small learning environment that is representative of an early college high school. In the smaller environment, support can be more readily personalized and peers develop close relationships in which they can help each other succeed. When students struggle because they are either unable or unwilling to meet academic demands, peers and caring adults can sometimes positively influence them.

AVID

There are also a variety of high school-based programs that do not incorporate opportunities for the acquisition of college credit but are simply designed to encourage underrepresented students to prepare and go to college. College access for the underrepresented and underserved is encouraged through a variety of outreach initiatives. Students in high school are provided opportunities for financial counseling, scholarships, college visits, career guidance, personal growth/enrichment, tutoring, academic advising, and test preparation courses (National Access College Program, 2008). One of the best known and successful of these programs is AVID (Advancement Via Individual Determination), an elective course initially developed in 1987 by a teacher. Designed to help underserved and underachieving students take advantage of opportunities to participate in rigorous courses such as Advanced Placement (AP), as well as train them to be able to achieve college success, today the AVID program is in

middle schools and high schools in 39 states, the District of Columbia, and countries across the world. AVID emphasizes access, rigor, high performance standards, and excellence for first-generation, low-income, and minority students with the goal of increasing attendance and success in college (Baltimore County Public Schools, 2010).

The AVID program is designed to help students in the academic middle (B, C, and even D students) develop college ready skills and targets students who have the desire to go to college and have the willingness to work hard. Most AVID students come from low-income and/or minority families and will be the first in their families to attend college (Watt, Powell, & Mendiola, 2004). In AVID elective classes, students learn organizational and study skills, develop critical thinking skills, receive academic assistance from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable (Watt, Powell, & Mendiola, 2004).

The AVID program has produced positive statistics since its inception 20 years ago. For example, while the national average for four-year college enrollment remains at about 35% of high school graduates, a longitudinal study conducted by Guthrie (2002), indicates that approximately 95% of AVID students report enrolling in college; 77% in four-year institutions and 17% in community colleges. Urban schools, rural schools, resource-rich schools, and struggling schools certify that AVID meets the needs of their students who are in the middle ranks of their class (Cunningham, Redmond, & Merisotis, 2003).

THE EL PASO COLLABORATIVE FOR ACADEMIC EXCELLENCE

Prior to the development of early college high schools and T-STEM initiatives, public schools and institutions of higher education in El Paso instituted educational reforms that targeted the diverse, low-income, often underserved and underrepresented population of the city by incorporating such efforts as dual credit, academic and motivational rigor and support, and professional development for staff and faculty. A brief discussion of a multi-faceted education organization, the El Paso Collaborative for Academic Excellence, illuminates concerns and issues that arise in the formulation and implementation of reform efforts and also provides insight into the demographics of the El Paso region and its student population.

The El Paso Collaborative for Academic Excellence was established in 1991. On its web site (2009) the Collaborative describes its efforts as “centered on the belief that all children, regardless of race or ethnicity, the school they attend, or the neighborhood they live in, are entitled to a first-rate education, to educators who believe in them, and to a real chance to learn challenging content” (Welcome, 2009, par. 1). The ideology is familiar and representative of the pervasive democratic ideal that the American public education system has striven for over the past century and that also underlies the early college high school initiative and its design components.

The Collaborative’s commitment is based on “the recognition that real educational change never occurs as a result of efforts on the fringes, but rather, will take changing the core of what schooling is all about and how schools and classrooms operate” by bringing together “the city’s education, civic, and business leaders to work together across sections to ensure high academic achievement among all young people

in El Paso, from their very first year in school through the university" (Welcome, 2009, par. 1). The Collaborative's guiding principles are equivalent to what Tyack and Cuban proposed as crucial for reform to be effective and to persevere, that better schooling results from steady, reflective efforts of all those who have a stake in our education system (Tyack & Cuban, 1995, p. 135). Collaborative efforts are "continuously evolving as lessons are learned and the needs of schools change" (About the Work, 2009, par. 1). Because state and federal policies change, "new challenges, along with new funding opportunities" influence their priorities and plans. Even though changes in course have been dictated by state and federal regulations and mandates, the Collaborative has adhered to the overarching goal set at their inception and maintains that it "continues to achieve its key goals through its numerous initiatives" (About the Work, 2009, par. 1).

The Collaborative proposes that all of El Paso's children from Kindergarten through a bachelor's degree are entitled to the same level of academic opportunity, academic success. If this promise entails ensuring that "all students graduate from high school prepared to enter and succeed in a four-year college or university" (Welcome, 2009, par. 2), then it also means that achievement gaps among groups of students must also be closed.

This organization defines itself as a "quietly powerful force in schools and districts throughout our community, following through on our commitment to provide a high-quality education to all of El Paso's students and raising the sights of everyone -- students, teachers, administrators and parents" (Welcome, 2009, par. 2). Specifically, the Collaborative has spearheaded and facilitated several reform initiatives in El Paso:

- A Mathematics and Science Partnership (MSP) with El Paso's public schools has been in progress since 2002.
- The El Paso T-STEM (Texas – Science, Technology, Engineering and Math) Center was founded in 2006 and continues today.
- An initiative to align Mathematics K through 16 began in 2002 and continues today.
- Think College Now began in 2002 and is still in effect today.
- Literacy in Action was a program that ran from 1996 through 2006.
- A Parent Educator Network program ran from 2002 through 2008. Urban Systemic Program (USP) ran from 1999 to 2004.
- Urban Systemic Initiative (USI) ran from 1994 to 1999.
- A Technology and Education Challenge Grant provided services from 1998 to 2003. (About the Work, 2009, par. 2).

The Collaborative describes all of its initiatives as aiming “at improving the schooling experience and academic achievement of all students in our region” by “focusing on reforming the core of schools; on the relationships between teachers and students, families and schools, administrators and teachers, and more importantly, on the way knowledge is constructed, problem solving and learning, and developing high expectations for all students” (About the Work, 2009, par. 2). Professional development for teachers has been a particular priority, with efforts also carried out with principals, on-site and district administrators, parents, and civic and business leaders (About the Work, par. 2).

NEEDS OF DISADVANTAGED AND UNDERREPRESENTED STUDENTS

A general overview of the needs of disadvantaged and underrepresented students incorporates and summarizes the importance of programs and initiatives discussed thus far that serve underrepresented and underserved students. Because dual credit and concurrent enrollment programs have traditionally had limited impact for underrepresented students, educators have reexamined the programs' initial objectives in attempts to recreate them so that underrepresented high school students are able to take advantage of college access opportunities.

The missions of community colleges across the country have historically incorporated accessibility for all, no matter what their background or skill level (Gleazer (2000). Because community colleges are adaptable with a student oriented and community focus, they are the perfect institution to collaborate with public school districts and high schools in the creation of innovative programs that link the two previously distinct and separate branches of education. Enabling underrepresented students to move through high school to postsecondary education more quickly than traditional methods allow saves time and money for them, and in turn increases motivation.

Evidence of barriers to higher education for underrepresented students is found in statistical evidence. While the average high school graduation rate of 70% has stayed constant for 20 years (Barton, 2005), indicators of college readiness vary widely by student subgroups. Hispanics have the lowest average for college readiness at 16%, with African Americans averaging 20%, and Whites and Asians averaging 37% and

38% respectively (Greene, 2003). Research has shown that deficiencies in college readiness can be correlated to poor persistence rates. Across the country only 25 % of students who enroll in a college or university earn a degree (Education Trust, 2009). Finally, students from families in the top 25% income bracket are approximately seven times more likely than students from families in the bottom 25% bracket to earn a bachelor's degree (Education Trust, 2009).

Poor K-12 preparation is credited with preventing students from participating in postsecondary education. This could be the result of poor state assessments, such as TAKS in Texas. ACT Inc. documented in 2005, 70 percent of college admissions test-takers not ready for college work in reading, writing, and mathematics (Spence, 2007). Because most college-bound students have taken college preparation coursework, then the implication here is that high school coursework is not sufficient to prepare students for entry level college classes.

Besides the fact that many students who do graduate from high school are not college ready, many more do not even finish high school. Mortensen (2005) documented that only 38% of 9th graders in the entire nation persist through high school and directly enter college (Mortensen, 2005). While American students in 4th and 8th grade score higher than the international average in mathematics, freshmen and sophomores in high school score below the international average (American Institutes for Research, 2005). These students, research suggests, become those 63% of university and community college students that require remediation (Callan, Finney, Kirst, Usdan, & Venezia, 2005). The correlation between college readiness and college completion rates represent a worse scenario than transition issues between high school

and secondary education. For example, nationally, 18% of 9th graders go on to complete a college degree in 4 to 6 years (The National Center for Public Policy and Higher Education, 2004).

There is a consensus among parents, students, business leaders, educators, and politicians that the American educational system needs to be revamped (Haycock and Huang, 2001):

- Fewer than three in ten teenagers think their school is “very academically rigorous;
- “A” students in high-poverty schools score at the same level as “C” and “D” students in affluent schools;
- Seventy-two percent of high school graduates go on to some form of postsecondary education, yet only 44% have taken a college-prep curriculum;
- Twenty-nine percent of college freshmen take one or more remedial course in reading, writing, or math;
- By age 24, 7 percent of young people from low-income families have graduated from college, versus 48 percent from high-income families.

(p. 14)

The aforementioned supports the need for programs that enable children and teenagers to acquire the skills and knowledge to be competitive as adults and to help them pursue and be successful in at least two years of college.

HISPANICS IN SECONDARY AND HIGHER EDUCATION

The statistics in this section highlight the importance of targeting Hispanic students with initiatives designed to increase attainment of secondary diplomas and college degrees as Hispanic representation in high schools is increasing and is projected to continue to do so. In 2005-06, Hispanics represented 17% of high school students. But between 2005 and 2015, the number of Hispanic public high school graduates is projected to increase by 54 while White graduates are estimated to decline by 11% (Western Interstate Commission for Higher Education, 1992).

Juxtaposed with these projected increases in numbers, academic achievement, already low for Hispanics, have been decreasing and will most likely keep decreasing as sheer numbers increase unless programs are established that make a difference. For example, average reading scores on NAEP (National Assessment of Educational Progress) exams for Hispanic high school seniors has decreased. In 1992, the average reading score for Hispanic seniors was 279; in 2005, it was 272 (national center for education statistics, 2009). And while the status dropout rate for Hispanics has decreased from 32% in 1990 to 22% in 2006, it is still higher than that of other groups: 11% for blacks, 6% for whites, and 4% for Asians/Pacific Islanders (national center for education statistics (national center for education statistics, 2009).

On a positive note, the average rate of high school completion for Hispanics has increased in recent years. The high school completion rate for Hispanics overall increased from 60% in 1987 to 65% in 2007 (national center for education statistics, 2009). Still, Hispanics represented 12% of SAT test-takers for 2008 college-bound seniors, but had lower mean scores in all areas of the SAT reasoning test than did White, Asian/Pacific Islander, or American Indians/Alaska Native students (national center for education statistics, 2009). In addition, more Hispanic students are often unsure what educational level they will reach. The percentage of seniors who did not know what level of education they would attain increased from 8% in 1992 to 14% in 2004 (national center for education statistics, 2009).

While more Hispanic students are enrolling in college, it is still fewer than other sub-groups of the population. In 2006, 58% of recent Hispanic high school graduates had enrolled in college, compared to 69% of their white and 56% of their black peers (national center for education statistics, 2009). Hispanics have increased their college-going rate from 51% in 1996 to 58% in 2006 (national center for education statistics, 2009), but Hispanics of traditional college-age are less likely to be enrolled in college. In 2006, 24% of Hispanics 18-24 years old were enrolled in degree-granting institutions, compared to 33% of African American and 41% of White students (national center for education statistics, 2009).

EL PASO BORDERLANDS REGION AND DEMOGRAPHICS

El Paso, Texas differs from other U.S. cities in its very high percentage of Hispanic population at 72%. It borders one of Mexico's largest cities, Juárez (*Paso del*

Norte Health Foundation, 2010). In the El Paso/Juarez border region, economic and cultural bonds fuse the destinies of both cities and their inhabitants. The symbiosis, evident in the close relationships between the two urban complexes in the region has been described as extraordinary (Martinez, 1994, p. 40). The El Paso/Juarez trans-border metropolis is considered one of the "greater" core borderlands regions along the U.S. Mexico border (p. 41).

In the mid-nineteenth century, the border between the United States and Mexico became permanent and since then the society has been built on links relative to trade, tourism, migration, and industrialization. These relationships have thrived in a context of interdependence. This borderlands society is not only dependent on vigorous transnational interaction, but has been described as having "a complex system of social organization that transcends the conventional dividing lines of nationality, race, ethnicity, and class" (Martinez, 1994, p. 56).

When negotiators signed the Treaty of Guadalupe Hidalgo in February 1848, the border regions were of marginal importance to the United States. For decades the Southwest did not contribute substantially to the U.S. economy. But leading up to and during the twentieth century, economic growth began to shift from northern regions to the southern border regions and along with industry came population growth (Martinez, 1994, p. 129). The development of railroads in the 1880s began to change El Paso's economic position. El Paso became a major manufacturing center with oil refineries, a copper refinery and smelter, cement plants, clothing manufacturers, and major defense installations (p. 132).

Today, the U.S.-Mexico border is the most frequently crossed international border in the world and the economy of the United States is influenced by the economy of Mexico (Martinez, 1994, p. 129). In tough economic times in the United States, difficulties are often magnified in border communities (p. 141). Connections between El Paso and its sister city, Juarez, Mexico exacerbates problems in El Paso. El Paso's large and growing Hispanic population, many of whom have come to the United States to escape poverty in Mexico, suffers from high unemployment in this country and many speak little or no English so are relegated to low-wage jobs or no jobs at all. And because of so many immigrants, wages are lower in El Paso compared to many cities in Texas and in other states. In addition, El Paso has one of the nation's highest local tax rates (p. 132).

With immigration from Mexico steadily increasing since 1986 and most immigrants concentrated in California, Texas, New York, Illinois, and Florida (Martinez, 1994, p. 314), Hispanics have become the poorest ethnic minority in the United States. The 1995 Census revealed that while the median household income rose for all America's ethnic and racial groups it declined for the 27 million Hispanics by 5.1 percent (p. 353). In 1997, Spanish speakers represented 24 percent of America's working poor, up from 18% in 1985. Average income levels for Hispanics have dropped by 14% since 1989, from \$26,000 to \$22,900 (p. 353).

Both American-born and immigrant Hispanics have experienced "an almost across-the-board impoverishment" (Martinez, 1994, p. 353). While researchers cannot confirm that declining income levels are solely due to a lack of education, they can

attribute it to this fact, which is exacerbated by the fact that many Hispanic families have several children and mothers seldom work outside the home (p. 354).

In addition to having a higher poverty rate as a group, Hispanics also have "the highest dropout rate from schools and the lowest rate of college graduation" (Martinez, 1994, p. 354). The newest immigrants from Mexico and Central America are the poorest because of their circumstances as recent immigrants with little or no education or training. As Hispanic immigrants keep coming, wages are kept down in already low-paying jobs and it is the newest immigrants who are the poorest, taking jobs in low-paying industries (p. 355).

Structural changes in the American economy have also prompted a loss of jobs for unskilled and blue-collar workers. More and more, jobs require technical expertise and these jobs thus require higher education levels than most Hispanics attain. 1990 census figures revealed that only 78 percent of American-born Hispanics finished high school compared to 91 percent of Whites and 84 percent of African Americans. Based on figures from 1994, 9 percent of Hispanics over the age of twenty-four had a college degree compared to 24 percent of non-Hispanics (Martinez, 1994, p. 355). If one subscribes to the logic that class and education levels, not race, determine the number of professionals in any group, still, most Hispanics are born to recent immigrants and have been documented to not be as successful in pursuing an education (p. 363).

Because the population of El Paso is predominantly of Hispanic origin, with school age children of Mexican and Mexican-American descent, programs designed to increase the educational levels of the city's underserved and underrepresented students

are of great importance for the region and for the individuals. Evaluations of the efficacy of those programs are crucial to the development of strategies and processes that will better serve them (Duignan, & Gann, 1998).

THE DEVELOPMENT AND EVOLUTION OF EARLY COLLEGE HIGH SCHOOLS

In order to find ways to remedy shortcomings in the nation's school system and guide educators to better serve underrepresented students the Bill and Melinda Gates Foundation became involved in high school reform. Initially, the Foundation expanded the Middle College High School (MCHS) concept first articulated in 1972 (Lieberman, 2004). The MCHS initiative had developed small learning communities on college campuses to provide disengaged high school students a fresh start in high school and an opportunity to participate in college level classes.

While there are still middle college high schools, MCHS evolved into ECHSI. The knowledge gained from MCHS over the course of 30 years experience influenced the mission and goals of ECHSI. While the design of early college high schools incorporates some of the principles of MCHS, it emphasizes different goals. In middle college high schools, students could earn college credit, but were never given the opportunity to earn a degree while still in high school. Early college high schools are designed around a structure that enables high school students to earn both a high school diploma and an Associate's degree in 4 to 5 years with none of the costs of a college degree. Tuition is free and books are purchased for the students by the high schools (Lieberman, 2004).

MIDDLE COLLEGES TO EARLY COLLEGES

Before discussing then the Early College High School Initiative and evaluations of its effectiveness thus far, an explanation of the middle college model as a way to reform traditional high schools will show how many of their design aspects guided the development of ECHSI core principles. Middle colleges are structured based on the following criteria:

- Total enrollment is limited to 450 students.
- Location is on a college campus.
- Operation is on a college schedule, with no bells, hall monitors or metal detectors.
- High school faculty gain privileges of college faculty such as better facilities, private offices, personal telephones, professional respect, and the opportunity to teach at the college level.
- Intense peer and group counseling, with a high ratio of counselors and paraprofessionals to students.
- Internships are encouraged.
- Calendar is based on the college schedule. (Lieberman, 2004)

Middle College High Schools are secondary schools located on college campuses across the nation. They usually house grades 10 through 12, using facilities and resources available at the postsecondary education institution that hosts them. Each middle college high school facilitates a rigorous curriculum in a small learning community, 100 or fewer students per grade level. Strategies are employed to provide

support for a student population that has been historically under-served and underrepresented in colleges and universities. While attending a middle college high school, students have the opportunity to take a few college classes at no cost to themselves (*Middle College National Consortium, 2008*).

The middle college high school was founded in 1974 at LaGuardia Community College (*Middle College National Consortium, 2008*). The idea was to offer disengaged students the opportunity to participate in college level classes and thus hopefully become motivated to finish high school and continue on to higher education afterwards. The Middle College National Consortium was established as a support network for middle college high schools to assist them in implementation so that underperforming students could meet high academic standards (*Middle College National Consortium, 2008*).

Key concepts explain how the Early College High School Initiative expands on the middle college model. Early college high schools,

- Reach out for students who are underserved by the regular schools.
- Demand a cooperative relationship between the district high school administration and the college president.
- Offer a different sequence of courses from the 10th grade and an accelerated program from the 9th grade to the associate's degree, which can be achieved in five years or less, instead of six.

- Combine the resources of a high school on the college campus with the college facilities (gym, library, cafeteria), making them all available to the early college high school student.
- Require active college campus collaboration from the college administrative structure: faculty interchange, support from the college divisions of finance, admissions, scheduling and counseling under a college-appointed administrator.
- Enhance the role of high school faculty.
- Integrate high school and college study in an articulated program. (Adelman, 2006)

Early college high schools incorporate characteristics of middle college high schools, such as locations on a college campus, strong academic programs, and a supportive environment. They are also designed to serve the same target population (*Middle College National Consortium*, 2008). So while middle colleges are high schools for underserved young people that are located on college campuses, and are where every student can earn some college credit, early college high schools have evolved the model by providing a coordinated course of study in which students can earn up to 60 college credits while in high school. "Middle colleges and early college high schools have similar design principles; the main difference is the amount of college course work expected--and, therefore, the degree of secondary-postsecondary integration" (Adelman, 2006).

Both of the models, MCHS and ECHS, are based on the idea that "two years of college is considered the minimum to start young people on the road to a middle-class

income, but the high school-to-college transition is a point at which the education system loses many young people" (Adelman, 2006). Design principles are meant to make the transition easier, as well as facilitate it. Ways in which early college high schools consciously integrate the high school and college experiences are as follows:

- Curriculum is designed as a coherent unit, with high school and college-level work blended into a single academic program.
- Students are allowed to focus on their studies in their last years of high school, rather than be distracted by the daunting maze of college and financial aid applications.
- College is far more affordable for students and their families, who save two years worth of college tuition.
- By the time students have graduated from an early college high school, they have gone well past the "20 credit threshold" that is a key breaking point between students who complete a college degree and those who never finish college.

(Adelman, 2006)

THE EARLY COLLEGE HIGH SCHOOL INITIATIVE

Early college high schools are guided by the idea that a rigorous high school curriculum and instruction coupled with the incentive of earning college credits can motivate struggling students, which will in turn increase their interest in and access to a postsecondary education. Partnerships are developed between public secondary schools and higher education institutions to create early college high schools that reflect local conditions. Goals of early college high schools include minimizing the barriers between high school and college for the underserved and underrepresented, easing the transition from secondary school to higher education, preparing students for and ensuring interest in higher education, and increasing high school graduation rates (Glick, 2006, p. 2).

In ECHSI *challenge not remediation* is cited as the key foundation for “those young people who are least likely to attend college and for whom society often has low aspirations for academic achievement” (Overview & FAQ, 2009, par. 1). To realize this ideal, “secondary and postsecondary partners” are guided to “rethink traditional curriculum sequences, find creative ways to align and connect high school and college experiences, and provide the academic and social supports students need to succeed in an intensive early college program of study” (par. 1). The goal of the program is for early college high school students to be “challenged and supported to develop the knowledge, skills, and behaviors that lead to success in college” no matter how prepared they are coming in with school designs “based on the needs of particular student populations” (par. 2).

The Bill and Melinda Gates foundation, which provides start up funding, and 13 intermediary organizations plan to “ultimately open about 250 small schools, serving over 100,000 students annually” (Overview & FAQ, 2009, par. 2). Jobs for the Future (JFF) coordinates implementation and supports local partners with guidance and professional development. Early college high schools are advertised as having “the potential to improve high school graduation rates and better prepare students for high-skill careers by engaging all students in a rigorous, college preparatory curriculum and compressing the number of years to a college degree” (par. 2). In addition, “Foundation and organization members believe that “many more students will benefit from school designs and structured supports that have been influenced by the early college high school movement” (par. 3).

The ECHSI website discusses how intermediary organizations “jumpstart new ventures, conduct feasibility studies, create due diligence processes, engage outside experts, and provide professional development for the schools and communities they serve” (Overview & FAQ, 2009, Who Does What, par. 4). In addition, intermediary organizations manage grants and select and support school sites, and provide technical support, guidance, and professional development (The Basics, par. 35). When the Bill & Melinda Gates Foundation “initially selected a diverse group of intermediary organizations to develop early college high schools” some of their rationale and strategy was “to test a variety of partnership models that would demonstrate the power of the early college concept” (Who Does What, par. 5).

Jobs for the Future (JFF), an action/research and policy organization is notable in a discussion of intermediaries as it has the distinction of being the “lead coordinator,

manager, and policy advocate for the Early College High School Initiative” (Overview & FAQ, 2009, Who Does What par. 6). As such, “JFF plays an integral role in the implementation and coordination of the initiative by collaborating with the partners and funders to create a guiding vision, mission, and overall strategy for the initiative across the nation” (Who Does What par. 6). The Early College High School Website states that “JFF gathers and shares data about the early college high school movement, provides opportunities for networking across partners and regions, and educates national, local, and state audiences about early college high schools” (Who Does What par. 6).

Rationale for ECHSI reform is based on the premise that “a postsecondary education is almost essential for financial and personal freedom in today’s economy” (Overview & FAQ, 2009, The Basics par. 2). The argument that “a four-year college graduate earns two-thirds more than a high school graduate does” substantiates this rationale (The Basics par. 2). Additional rationale for program components are supported by “national statistics on the progression of students from high school to college” (The Basics par. 2). Statistics support the initiative’s goals by to “better connect and integrate secondary and postsecondary schooling” by providing “for radical interventions to increase the number of low-income young people gaining post-secondary credentials” (The Basics par. 2). Examples of statistics include:

- Young people from the middle-class and wealthy families are almost five times more likely to earn a two- or four-year college degree than those from low-income families

- For every 100 low-income students who start high school, only 65 will get a high school diploma and only 45 will enroll in college. Only 11 will complete a postsecondary degree.
- High school graduates from poor families who score in the top testing quartile are no more likely than their lowest-scoring, affluent peers to attend college. The former enroll at rates of 78 percent; the latter at 77 percent. (Based on the high school graduating class of 1992)
- Nearly half of our nation's African-American students and nearly 40 percent of Latino students attend high schools in which graduation from high school is not the norm. In the nation's 900 to 1,000 urban "dropout factories," completing high school is a 50:50 proposition at best.

(Overview & FAQ, 2009, The Basics par. 3).

The ECHSI website describes the initiative as bold, facilitating "practices... needed to ensure that more young people earn the postsecondary credentials that are crucial to their individual economic security and to the viability of our nation's economy" (Overview & FAQ, 2009, The Basics par. 6). Policy is further described as a response to the fact that "educational terrain of college-courses-in-high-school belonged almost exclusively to a small, privileged group of young people: those whose families could afford high-quality private high schools and those in well-funded public schools that offered Advanced Placement and similar options to their highest-achieving students" (The Basics par. 6).

ECHSI schools enable “students from a wide range of backgrounds and with diverse prior accomplishments” to show “that the academic challenge provided by college-level courses can be an inspiration, not a barrier” Overview & FAQ, 2009, The Basics par. 7). By promoting rigorous and interactive teaching methods and enhancing support, these schools are meant to be designed to inspire achievement. Promising strategies include “adopting school-wide literacy practices, focusing on inquiry-based instruction across grade levels and content areas, and creating...courses to complement college courses” (The Basics par. 7).

As of the 2006-07 school year, ECHSI cites the following accomplishments:

- Over 20,000 students in 24 states are attending early college high schools.
- Two-thirds of students enrolled in early college high schools are African-American or Latino.
- Eight early college high schools target and serve Native students.
- Twelve schools specifically serve students who previously dropped out or were unsuccessful in traditional high schools.
- The majority of students enrolled in early college high schools across the nation will be the first in their family to attend college.
- Nearly 60 percent of early college high school students are eligible for free and reduced lunch.
- Almost 160 schools in 24 states. (Overview & FAQ, 2009, The Basics par. 9).

The ECHSI website acknowledges that each early college high school is given the latitude to develop “a unique vision and a learning environment that represents community interests and student needs”, while entrusted with incorporating some necessary characteristics:

- Students have the opportunity to earn an Associate’s degree or up to two years of transferable college credit while in high school.
- Mastery and competence are rewarded with enrollment in college-level courses and the opportunity to earn two years of college credit for free.
- The years to a postsecondary degree are compressed.
- The middle grades are included in the school, or there is outreach to middle-grade students to promote academic preparation and awareness of the early college high school option.
- Schools provide academic and social supports that help students succeed in a challenging course of study.
- Learning takes place in small, personalized learning environments that demand rigorous, high-quality work and provide extensive support.
- The physical transition between high school and college is eliminated—and with it the need to apply for college and for financial aid during the last year of high school. (Overview & FAQ, 2009, The Design par. 1)

Early college high schools are meant to foster results similar to those of high-performing small schools:

- A common focus on key, research-based goals and an intellectual mission;

- Small, personalized learning environments, with no more than 100 students per grade;
- Respect and responsibility among students, among faculty, and between students and faculty;
- Time for staff collaboration and for including parents and the community in an education partnership;
- Technology as a tool for designing and delivering engaging, imaginative curricula; and
- Rigorous academic standards for both high school work and the first two years of college-level studies. (Overview & FAQ, 2009, The Design par. 2)

The initiative is said to be different from Dual Credit, Advanced Placement, and other pre-college programs because of “the reach and coherence of the blended academic program and a relentless focus on underrepresented students” (Overview & FAQ, 2009, The Design par. 4). Following is what makes early college high schools unique:

- Fully integrates students’ high school and college experiences, both intellectually and socially;
- Enables students to earn up to two years of college credit toward a degree while in high school, not just a few college credits;
- Blends the curriculum as a coherent unit, with high school and college-level work melded into a single academic program that meets the requirements for both a high school diploma and, potentially, an Associate’s degree;

- Grants college credit through the postsecondary partner institution and enables students to accumulate the credits toward a degree from that institution or to transfer them to another college. (The Design, par. 4)

Policies designed by local partners address aspects of programming meant to facilitate the transition from high school to college by “consciously [integrating] the high school and college experiences” for those for whom it is likely to be problematic. How to “design curriculum as a coherent unit, with high school and college-level work blended into a single academic program” is an example of a decision local partners make (Overview & FAQ, 2009, The Design, par. 7). Policy decisions need also be “based on research and practice about what helps underrepresented young people prepare for success in high school and postsecondary education” (The Design, par. 7). Three features are designated as key “to [promoting] promote success for even the most struggling students” (The Design, par. 7).

- Small size. Early college high schools enroll 100 or fewer students per grade. Students are well-known by adults.
- Personalization and student supports. There is an emphasis on assessing students and providing supports based on the identified needs of individual students.
- Power of place. Early colleges draw on the college environment and experience to build students’ identity as college goers. (The Design, par. 7)

Those who design policy at the local level are district and postsecondary partners. While each early college high school in El Paso is administered by a

community college and an independent school district, postsecondary partners can also be four-year colleges, and universities, public and private. Secondary and postsecondary partners are “key players in the design and day-to-day operation of early college high schools” (Overview & FAQ, 2009, The Design, par. 8). The ECHSI website discusses how “an early college high school requires sustained involvement from both the secondary and postsecondary sides...formally and informally”. Responsibilities include “participation in: school planning processes and governing boards, curriculum committees, syllabus planning activities, co-delivery of courses with high school faculty, provision of tutors, mentors and student teachers, and the creation of ‘scaffolded’ learning experiences such as ‘bridge’ courses to ease the transition to college-level work and mini-seminars for younger students” (The Design, par. 9).

DESIGNING A T-STEM EARLY COLLEGE HIGH SCHOOL

Educational leaders and politicians agree that current and widespread educational practices need to be changed to create successful learning environments for students that are not being reached with the conventional methods. Large, comprehensive high schools are perceived as inefficient; thus reforms for early college high schools and T-STEM academies are based on smaller designs, with structures and strategies meant to offer more rigorous and relevant curriculum and address the needs of students who struggle. The Ideal early college high school is meant to be designed to provide an alternative path to higher education for some of our nation’s most vulnerable students. Early college high schools defy commonly held expectations for this student population and set these students on a path toward academic and career success (*Early College High School Initiative*, 2009).

Fundamentally, early college high school processes are designed to offer the alignment and blending of secondary and postsecondary experiences for students historically underrepresented in higher education. It is understood that individual early college high schools are able to develop their own unique visions and learning environments that represent community interests and student needs while sharing several general characteristics. These characteristics include having the opportunity to earn an Associate's degree or up to two years of transferable college credit for free while in high school by having mastery and competence rewarded with enrollment in college-level courses. The physical transition between high school and college is eliminated – and with it the need to apply for college and for financial aid during the last year of high school (*Early College High School Initiative*, 2009).

Campus culture is a key component of the early college high school experience. Very different from a comprehensive traditional high school, learning is meant to take place in small, personalized environments with appropriate academic and social supports to help students succeed in a challenging course of study. Early college high schools are expected to demand rigorous, high-quality work, but provide extensive support (*Early College High School Initiative*, 2009).

The merging of T-STEM Academy Design principles into the early college high school model is in some ways redundant and complementary, yet in others additional. Similarities include personalized and individualized school design and implementation, small learning environments, enhanced rigor with appropriate support, guidance and professional development from grant funders and stakeholders, and the expectation that students will pursue a postsecondary education. Additions include the foundation of the

T-STEM purpose, which is to increase student achievement by engaging and exposing students to innovative science and math instruction, and to promote education strategies that integrate the teaching of STEM in a way that challenges students to innovate, invent, and demonstrate understanding in real world contexts.

In the case of TMECHS, the grant funding institution, the Texas High School Project/Communities Foundation of Texas doubled the amount of money initially provided from \$400,000 to \$800,000 because TMECHS would be both T-STEM and an Early College High School. Ramifications of the merged aspect of the school are evident in several areas of the school's design, such as T-STEM stipulations with regard to how students are recruited and enrolled, course sequences and individual degree plans, and the embedding of summer research institutes, project-based learning, and a senior project into the curriculum.

Aside from STEM related stipulations documented in grants and in the T-STEM Blueprint, such as reporting categories, support mechanisms and requirements for professional development, and criteria for a majority of students to designate STEM majors (which dictates relationships between faculty and staff at the high school and the community college), the design of a T-STEM early college high school conforms to ECHSI principles. Partners involved in creating a T-STEM early college high school are the leaders of the high school itself, the postsecondary partner, school district leadership, community-based organizations and agencies, and local policymakers. A multi-year agreement between secondary and postsecondary institutions is facilitated to outline essential design components in an ideal arrangement, including mission, academic plan, roles and responsibilities, staffing, facilities, student support,

professional development, college readiness indicators, and payment of fees, and budget issues.

Partners develop a vision and mission consistent with ECHSI and T-STEM principles and collaborate to develop a school design plan to structure the school day; address state, district, and college requirements; define paths to achieve up to two years of credit; and define academic and social supports (*Early College High School Initiative*, 2009). Foundational attributes of a T-STEM ECHS model are incorporated during the design phase and include shared, clear, high expectations and standards, with all students completing a coherent, rigorous course of study and the majority those students completing a STEM degree; small, personalized learning environments; and plans to include technology as a tool for designing and delivering engaging curricula.

Several processes must be discussed and designed. Classroom and administrative space on a college campus is planned for and the provision of orientation activities, college identification cards, and access to college facilities is discussed and decided upon (*Early College High School Initiative*, 2009). A process is developed for parental involvement, including ways to introduce families and parents/guardians to the school and to provide ongoing opportunities for input regarding school development. Community engagement is discussed and planned for via informational meetings, town meetings, and forums to encourage buy-in related to school vision and mission (*Early College High School Initiative*, 2009). Student recruitment and selection is planned for with materials, venues, and time frames decided upon.

The recruitment and selection of both students and teachers is considered next. Mechanisms for recruitment and selection of students are developed that reach targeted students and satisfy T-STEM and ECHS criteria. Selection criteria for faculty and staff are decided upon by key stakeholders. Highly qualified secondary and postsecondary instructors who have been successful working with the target population of students are a key focus for faculty recruitment. Professional development is planned and ultimately orchestrated by leaders from both institutions and funding agencies. Additional proactive planning in the area of professional development includes common planning time for teachers and the identification of professional development providers.

The issues of student support and student responsibility are next addressed. Strategies for academic and social student supports are articulated among stakeholders (*Early College High School Initiative*, 2009). How support will be provided within the school structure is planned. Clear discipline policies and consequences are established, as well as a process to hear and respond to student concerns. Plans and mechanisms to share this type of information with parents, students, and staff are made to develop and ensure a proactive environment with dialogue. Early intervention strategies can be utilized to motivate student attendance and encourage persistence.

Challenges with regard to student academics are discussed and planned for. All stakeholders understand the challenges inherent in facilitating a rigorous academic program with predominantly middle performing students. How to appropriately integrate technology and instruction is a factor in these discussions as are assessment needs. Student data will be incorporated in future planning processes by administration and faculty because student strengths and weaknesses are crucial when designing and

administering academic programs. Students must also be able to assess their own learning.

In order to ensure smooth transitions from secondary to postsecondary education and a good blending of coursework, transferrable courses, articulation options, and requirements to enter public postsecondary institutions are identified. Relationships among school leadership, counselors, faculty, and staff are set to provide extended services to address and mediate issues with regard to college access.

Policy, funding, and sustainability are also addressed for the short term and for the long term. Careful planning and an emphasis on consistency and follow-through on the part of school leadership are important in both the short and long term for an early college high school. Short-term financing involves a three to five year budget developed by key stakeholders and long-term financing involves the extension of grant funding, the institutionalization of processes, and the recruitment of new business and community partners.

ECHSI BENCHMARKS

Benchmarks for Early College High Schools (Appendix F) were developed collaboratively by several early college intermediary organizations and Jobs for the Future (JFF) to establish a set of ideals. The benchmarks were designed as an adjustable planning, improvement, and teaching tool to guide a school's growth (*Early College High School Initiative*, 2009). Seven benchmarks set forth conditions required to fulfill the goals of ECHSI in three phases, beginning, implementing, and realizing. Beginning is considered applicable to pre-implementation planning prior to a school's

opening. Implementing is the school development phase prior to the school's first graduating class. Realizing is the full school implementation, after a school has graduated its first class and operates with full planned enrollment. The phases house a framework of indicators of school progress and success with overlap among them. The benchmarks are designed to encourage and facilitate "an awareness of the dynamics of school development and the varying time frames required for the establishment of an effective school" (*Early College High School Initiative*, 2009). Their value is described as "providing a set of standards to guide continuous development and improvement in key areas" (*Early College High School Initiative*, 2009).

The seven benchmarks collectively utilized as a tool for ECHS stakeholders are:

1. Students completing early college high schools graduate with a high school diploma and up to two years of college credit. Areas benchmarked are:
 - A. Student attendance
 - B. Student persistence
 - C. Graduation rates
 - D. College credit and degrees
2. Early college high schools establish the enabling conditions necessary to prepare students for success in a rigorous, well-structured academic program leading to high school graduation and up to two years of college credit. Areas benchmarked are:
 - A. Mission
 - B. Leadership
 - C. School culture and design

- D. Location
 - E. Student recruitment and selection
 - F. Teacher retention
3. Early college high schools provide comprehensive students supports based on students' academic and social needs. Areas benchmarked are:
- A. Personalization
 - B. Respect, responsibility, and safety
 - C. Transfer and articulation plans
4. Early college high schools demonstrate effective instructional practices. Areas benchmarked are:
- A. Curriculum and instruction
 - B. Student assessment
 - C. Continuous improvement
 - D. Professional development
5. Early college high schools establish and institutionalize strong secondary/postsecondary partnerships to ensure student success. Areas benchmarked are:
- A. Collaborative leadership
 - B. Agreements
 - C. Planning and coordination
6. Early college high schools engage students, parents, community, business, and public agencies in developing and sustaining the schools. Areas benchmarked are:

- A. Leadership
 - B. Outreach and recruitment
 - C. Parent/family involvement
 - D. Community engagement
7. Early college high schools develop plans for sustainability. Areas benchmarked are:

- A. Policy
- B. Financing
- C. Long-term school sustainability (*Early College High School Initiative, 2009*)

ECHSI Benchmarks are attached as Appendix A.

The ECHSI Benchmarks from the beginning and implementing phases helped me to select appropriate policy documentation and to develop the interview grid for TMECHS policy formulation and implementation evaluation. The benchmarks from the beginning and implementing phases were appropriate guidelines for the development of my research design because TMECHS has yet to reach full enrollment. These benchmarks support the analysis and synthesis of data as well.

T-STEM BENCHMARKS

The T-STEM Benchmarks also influenced question categories for this research project and supported the analysis and synthesis of information. Like the ECHSI benchmarks, the benchmarks are not only meant to foster and facilitate best practices but are also meant to provide the basis for evaluation of progress and success

- Benchmark 1 Mission Driven Leadership includes 3 Program Requirements:

- Academy Design Blueprint and Implementation Plan requirements guide partners in the building of a school infrastructure that reflects high and consistent learning expectations and performance standards measured by internal and external measurement tools, the inclusion of the teaching of essential STEM literacy skills.
- Leadership requirements dictate a clear organizational and decision making structure that is understood by and participated in by stakeholders, expectations for teachers' additional responsibilities outside their classroom duties, and data driven performance standards.
- Student Achievement requirements incorporate data-driven decision-making, clear processes for program review, feedback mechanisms, ongoing formative evaluation processes, transformation of teaching methods for instruction in the STEM fields, a T-STEM Academy Leadership Coaching program, and participation in a statewide T-STEM network.
- Benchmark 2 School Culture and Design includes three program requirements:
 - Personalization requires that Academy size and class size remain small, that advisory periods are incorporated into the planning process, that a process is implemented to hear and respond to student voice, that school days are flexibly structure, that high quality student work is exhibited, and that every student has an individualized graduation plan.

- Culture dictates that the Academy community develops a handbook outlining procedures, that all stakeholders are involved in developing a culture of respect and responsibility, that positive student identities are facilitated, that school activities are open to all students, that the school is safe and orderly, and that the student attendance and participation is consistent.
- Postsecondary Success requires that Academies actively work with middle schools to develop interest in STEM education, that students are prepared for college readiness, that high quality, college preparatory tools are made available to students and their families, that a college-going culture is developed, that students are supported in earning college credit, and that students have access to college credits that map to economic workforce clusters in the STEM fields.
- Benchmark 3 Student Outreach/Recruitment, Selection, and Retention incorporates three Requirements:
 - Recruitment is to be designed to reach high need and underrepresented students with necessary support structures in place to enable participation by these students.
 - Open access dictates that recruitment and selection of students be a lottery-based process with no admissions requirements except that a student can progress from 8th to 9th grade; in addition, an Academy

student population must consist of greater than 50% economically disadvantaged students or a majority minority population.

- Benchmark 4 Teacher-Leader Selection, Development and Retention has three Requirements:

- Highly qualified teachers requires that faculty possess extensive subject knowledge and demonstrated success working with high-need students, and that innovative programs be designed to hire qualified STEM teachers.
- Professional development dictates that the Academy-based professional development model be incorporated, and that professional development be prioritized by need and informed by instruction, assessment, and data.
- Teacher retention suggests that teachers have autonomy over their own classrooms while being required to participate in orientation, induction, mentoring, professional development, and common planning time to achieve results-driven, team focused professional learning and collaboration. Administrative support is also a key feature in this benchmark requirement.

- Benchmark 5 Curriculum incorporates two Requirements:

- Rigor is achieved via the alignment of curriculum, instruction, and assessment, detailed scope and sequence for core disciplines, vertical alignment of content areas to state standards, assessment aligned to

curriculum with gaps in student comprehension addressed, and math and science coursework supported so all students are successful.

- STEM curriculum requires that innovative curricular programs related to the STEM fields are well defined, that the Academy develops a plan for accelerating student achievement, that contextual learning with a global perspective is facilitated, and that students complete an internship or a capstone project before they graduate.
- Benchmark 6 Instruction has five program requirements:
 - Shared Practices requires data-driven instruction, effective utilization of tools and strategies, a school structure that incorporates shared teach responsibility and accountability, instruction organized around clear expectations, and high quality curricular materials.
 - STEM Education Integration requires the use of problem-based and project-based learning with learning outcomes specified, innovative programs, and contextual learning.
 - Literacy Plan requires that the staff be committed to the belief that all students become competent readers, writers, and speakers, and that the Academy selects appropriate curriculum and instructional materials to make this happen.

- Technology integration requires that technology be integrated into the Academy's culture, curriculum, teaching strategies, and daily operations. All students should have access to technology and media resources.
- Assessment dictates that diagnostic, ongoing, and end of semester assessments for all students drive instructional decisions and that student information systems track progress.
- Benchmark 7 Strategic Alliances incorporates three requirements:
 - Parent and/or family participation requires plans for the development of strong school-family partnerships, open communication, applicable professional development, and shared responsibility.
 - Business and school community requires that key partners are secured to support the Academy,
 - Institutions of Higher Education dictates that an Memorandum of Understanding (MOU) articulates fiscal responsibilities and the delivery and acquisition of college hours, and that a tool be developed to monitor and evaluate collaborative efforts.
- Benchmark 8 Academy Advancement and Sustainability incorporates three Requirements:
 - Sustainability requires that budgets are sustainable and are balanced yearly, and that continued investments be made in math and science teacher professional development.

- Strategic Planning requires a plan for reaching a budget that supports staffing and expenditures and requires key stakeholders to encourage business partnerships and the involvement of policymakers to ensure sustainability.
- Progress dictates that T-STEM Academies set high expectations across a broad range of performance measures to become some of the highest performing campuses in the state by developing instructional plans and internal progress indicators.

(Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint, 2009)

EVALUATIONS OF EARLY COLLEGE HIGH SCHOOLS

The Early College High School website states that “although the initiative is relatively young, early data from early college high schools are promising” (Overview & FAQ, 2009, The Outcomes par. 1) and lists the evidence to support claims of positive and promising outcomes :

- The schools are reaching their target populations. Nationally, roughly three-fourths of the young people attending early college high schools are students of color, while nearly 60 percent report eligibility for free or reduced-priced lunch (a conservative indication of the number of students from low-income families). Most students attending early college high schools will be the first in their families to go to college. In contrast to alarming national data for students with similar demographic profiles, attendance rates for early college high school

students average over 90 percent, indicating high levels of student engagement and commitment to the academic program. Grade-to-grade promotion rates in early college high schools also exceed 90 percent, and the first students have graduated with impressive results. (Overview & FAQ, 2009, The Outcomes, par. 3).

- In 2006, three early college high schools granted diplomas to their first graduating classes. Those 115 seniors achieved dramatic success:
 - 80 percent were accepted to four-year colleges.
 - 85 percent graduated with 30 to 60 college credits.
 - Over 57 percent graduated with an Associate's degree (Overview & FAQ, 2009, The Outcomes par. 3)
- In 2007, more than 900 students graduated from 17 early college high schools around the country. Their achievements far surpass those of their peers from traditional high schools serving similar populations. Preliminary data show that:
 - Over 65 percent of the graduates were accepted to four-year colleges. Others have chosen to complete an Associate's degree by spending a fifth year at their early college high school.
 - More than 85 percent graduated with substantial college credit.
 - More than 250 early college high school graduates earned merit-based college scholarships. Four earned the prestigious Gates Millennium Scholarship, awarded to 1,000 high-achieving, low-income students each year. (Overview & FAQ, 2009, The Outcomes par. 4)

The Student Information System (SIS) coordinated by JFF and Public Consulting Group, schools, and school districts provide data that can be analyzed to document outcomes for the Early College High School Initiative. The SIS collects aggregated data and unidentifiable, student-level data, including that of post-early college high school higher education enrollment, while schools and school districts supply data on staffing, demographics, longitudinal information, courses, student GPA, transcripts, enrollment, discipline, attendance, and graduation (Overview & FAQ, 2009, The Outcomes par. 5).

Research conducted by the American Institutes for Research and SRI International is guided by three major research questions as their mission is to evaluate process as well as outcomes:

- What are the demographic, structural, organizational, and instructional characteristics of early college high schools?
- What factors support or inhibit the planning and development of early college high schools?
- What are the intermediate and long-term outcomes for students attending early college high schools, especially for students traditionally underserved by the postsecondary system? (Overview & FAQ, 2009, The Outcomes par. 6).

AIR and SRI produced their first report in 2004, with descriptions of “relationships among and characteristics of the partner organizations” (Overview & FAQ, 2009, The Outcomes par. 6). Their second report in 2006 documented successful enrollment of low-income and minority youth in the early colleges and associated college courses and high attendance rates. In addition, this report noted the challenges associated with

“accelerating students unprepared for college-level work and gauging the right amount of student support needed” (The Outcomes par. 6).

These and forthcoming evaluations combine “qualitative and quantitative data collection methodologies to document and describe the activities of the partners” (Overview & FAQ, 2009, The Outcomes par. 7) but rely more heavily on “qualitative methodologies, including interviews (both in person and on the telephone), observations, and documentation collections” (The Outcomes par. 7). Once enough time passes, AIR and SRI plan to “utilize the Student Information System to access district or state records and track student progress toward high school graduation and in college credit accumulation” (The Outcomes par. 7). In addition the collection of course descriptions is planned to investigate “the rigor of students’ course sequences” (The Outcomes par. 7).

Data collection activities by AIR and SRI are grounded in a conceptual framework that graphically shows interrelationships between key features that can be measured, evaluated, and analyzed. An initial conceptual framework was developed in 2002–03 when AIR and SRI were planning their first evaluation. This framework and a subsequent revised model are not meant to support the testing of causal models. Targeted evaluation processes are meant to be “descriptive...to document and describe the key features and their interrelationships for both formative and summative purposes” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. 4).

In 2005, AIR/SRI revised the conceptual framework based on an enhanced understanding of the ECHSI after conducting evaluations. Appendix A is a copy of this revised conceptual framework that incorporates “intermediaries and the relationships among organizations associated with the planning and implementation of an ECHS” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. 4). The following points outline the relationships represented with the early college high schools in the center.

- JFF supports the intermediaries
- The intermediaries foster the local ECHS partnerships
- The intermediaries and the local partners support the ECHS
- The Bill & Melinda Gates Foundation is influential

(Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. 5)

The most recent evaluation report by AIR and SRI in 2007 provides findings based on interviews, focus groups, and classroom observations conducted at 24 early college high schools during 2005–2006 and with 13 intermediaries, 4 sub-intermediaries, JFF, and the Bill and Melinda Gates Foundation, as well as quantitative data from publicly available sources. This study “focused mainly on structural and design elements, as well as successes and challenges experienced during implementation” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. 6)

In a general sense, evaluators suggest in this report that “overall implementation of the ECHSI is proceeding apace, with good progress in developing local partnerships, opening a critical mass of ECHSs, and growing multiple levels of professional learning communities that will help sustain the initiative into the future” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. 6). They continue that “mature intermediaries continue to refine their management and technical assistance activities as they support ECHSs that are beginning to graduate cohorts of students”, that “newer intermediaries and their schools are moving into the middle phase of implementation, learning as they go” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. xi).

Evaluators also state that each of their reports in 2005, 2006, and 2007 “have documented some of the ways in which the original vision has been shaped by reality and by the exigencies of the process itself” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. xi), a finding that correlates to the rationale that frames my own study. Adaptation often diffuses goals and in the case of early college high schools, this has already been evidenced by some schools relaxing the requirement that all students “earn 2 years of transferable college credits or an associate’s degree” by the time they earn a high school diploma. Core principles have also “received some degree of modification — or scant attention” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. xi). Because analyses of data gathered for the 2007 report revealed modification and even neglect of goals and Core Principles, evaluators have stated that “the Core Principles might be productively revisited, refined, and revised to provide a better and perhaps

more explicit roadmap for future developers of ECHSs" (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. xi).

An important aspect of the 2007 report's findings has to do with determining early college high schools that can be used as exemplars of the early college high school as a small school with strong college-going cultures. Evaluators propose that the initiative has been in force for a long enough length of time that there should be successfully created and sustained ECHSI schools that can be models for others. The report states that "with more and more ECHSs reaching full implementation, it seems to be time for the initiative to bring together the Core Principles with best practice, now observable in operational schools" because "the ECHSI needs its own exemplars, including evidence of promising student outcomes" (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. xi). The report continues that "when the initiative identifies these exemplars, it should widely publicize their stories, to encourage the continued growth of and support for the idea of blended secondary-postsecondary programs" (p. xi).

Sustainability of the Early College High Schools was a subject of the research done, with the following analyses resulting:

- Increasingly, intermediaries and local partnerships were focusing on sustainability issues that naturally included identifying multiple sources of adequate funding to support a nontraditional model of schooling; these issues also extended to concerns about maintaining staff stability and avoiding staff burnout.

- Factors that appeared to contribute to sustainability included a signed local partnership agreement delineating the responsibilities of all partners and the “friendliness” of state and local policies in allowing financial support for students who were participating in both secondary and postsecondary education sectors. (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. x).

With regard to Local ECHS Partnerships, “analysis of information... suggested the emergence of three partnership types as the ECHSI grew and matured:

- In partnership type 1, the ECHS itself led the partnership and “shouldered most of the responsibility and accountability”. In this type of partnership the ECHS “enjoyed considerable autonomy in decision-making but had to be concerned about maintaining enough involvement from partners to ensure continuing success”
- In Partnership type 2, the ECHS and IHE or district partner shared the responsibility for the partnership; both provided substantial support to an ECHS. The ECHS was most commonly a district school, and frequently the district and the IHE had a long history of partnerships on many fronts.
- Type 3 partnerships were similar to type 2 but involved some entity other than a school district (although a school district might also be on board) in partnership with an IHE to support an ECHS. The community partners in this type tended to be very deeply invested in the ECHS under development.

(Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. ix)

Research documented that each of these partnership types “offered strengths and weaknesses to the job of creating a strong ECHS” (Evaluation of the Early College High School Initiative: Select Topics on Implementation, 2007, p. ix). Combining this flexibility with other contextual dynamics ensures that ECHSI is a complex undertaking that invites policy implementation research.

STATISTICAL CHARACTERISTICS OF ECHS

A 2009 study documented statistical characteristics of early college high schools based on 2007-08 data on 157 early college high schools. Both qualitative and quantitative methods were employed. Characteristics were quantified with regard to how schools were set up, who the schools were serving, what college classes look like, and how successful students were at the various schools. (Berger, Andrea R. (2009, 25 March). *Early Findings on Early College High Schools*. American Institutes for Research)

Regarding set up, location, admissions, and enrollment, following are statistics documented in this recent study:

- 68% were new schools
 - 22% existing small schools becoming ECSs
 - 5% programs and 5% schools within schools
- 76% have a 2-year public college partner
 - 24% have a 4-year college partner
- 53% are located on a college campus

- Most of the remaining are in their own building
- 76% gave admissions criteria
 - 64% of applicants are accepted
- Fewer than 100 students per grade on average

(Berger, Andrea R. (2009, 25 March). *Early Findings on Early College High Schools*. American Institutes for Research)

With regard to populations served, Berger documented the following:

- Minority – 67%
- Free or Reduced-Price Lunch Eligible – 59%
- Limited English Proficiency – 10%
- 1st Generation College Going – 46%

With regard to college course and dual enrollment, a variety of average percentages were compiled:

- 61% of students have taken at least one college class
 - 73 % of 12th and 13th grade students
- 50% of college classes are in core academic areas
- 60% of students are integrated with traditional college students in a college class
 - 9th grade: 39%

- 10th grade: 59%
- 11th grade: 73%
- 12th and 13th grade: 76%

Finally, in this recent study, several claims regarding student success were supported:

- Students reported being academically engaged, finding school interesting and worthy of effort.
- Students reported high academic self-concepts.
- 76% of students expected to complete a 4-year degree or higher.
- On average ECSs have average daily attendance (ADA) rates over 94%
- 74% of ECS students are proficient in ELA. 67% are proficient in math.
 - ECSs outperformed districts by 7 percentage points in both ELA and math.
- On average, 86% of ECS students progress from one grade to the next.
- Students at ECSs located on a college campus had higher outcomes than ECSs at other locations on:
 - ADA (95% and 93%)
 - 9th to 10th grade progression rates (89% and 81%)

- Achievement proficiency rates (relative to their [independent school] district):
 - ELA – 14% above versus 1% below
 - Math – 16% above versus 1% below
- Based on several sources, graduates earned about a semester to a year of college credit while enrolled in the ECS.
 - 88% of graduates enrolled in college
 - 41% in a 4-year college or university
 - 47% in a 2-year college

Based on the data accumulated, this study proposed several conclusions under the title of what was now known about ECS students:

- Students are largely from populations underrepresented in postsecondary institutions.
- ECS students outperformed districts on state assessments.
- Students are accumulating college credit.
- Students expect to graduate from college, and many of the early graduates are enrolling in college.
- On many outcomes, students in ECSs located on college campuses are doing better than those not located on college campuses.

(Berger, 2009)

CHAPTER THREE

METHODOLOGY

POLICY FORMULATION AND IMPLEMENTATION

This study is a policy evaluation conducted to investigate the development of a program and its implementation (Scriven, 1991). While outcomes are included in the profile of TMECHS, unlike summative evaluations that primarily examine the effects or outcomes of a program, formative evaluation examines the delivery of a program while it is in process (Scriven, p. 199). To investigate how ECHSI and T-STEM policies regarding academics are translated in implementation at the local level here in El Paso two general questions were initially formulated to guide the research.

- How are ECHSI and T-STEM core principles articulated in policies and processes with regard to academics for TMECHS?
- How are TMECHS policies and processes regarding academics then translated in implementation by local partners and administrators at TMECHS?

To determine how policy was guided and articulated in documentation, such as the Communities Foundation of Texas/Texas High School Project Grant (Appendix A), the Interlocal agreement between EPCC and EPISD (Appendix D), El Paso Community College Procedure/High School Dual Credit Program Requirements (Appendix E), ECHSI Benchmark Tool for Early College High Schools (Appendix F), ECHSI Core Principles (Appendix C), the Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint (Appendix B), EPISD College and Career Readiness Standards (Appendix H), Transmountain Early College High School Application for

Admission (Appendix J), and the Distinguished Achievement ECHS Program @ TM and Associate Degree document (Appendix I) was reviewed. It was anticipated that academic issues would cover a range of topics within areas such as admissions and recruitment, college readiness, curriculum and instruction, support structures, and family engagement. Policy documentation revealed degrees of specification, how policy and processes were directed and expected, while the data collected from interviews with local administrators at various levels in organizational hierarchies revealed actual policy implementation.

Traditional policy evaluations are designed to identify "policy successes and failures – what works and what doesn't – and the factors that contribute to those particular outcomes" and "are intended to be a rational means to increase the effectiveness of decision-making in public programs" (Comfort, 1980, p. 35). Wallace, Cortner, and Burke (1994) write that these types of policy evaluations "provide information on whether adaptations in statutes, regulations, or implementing structures and processes should occur" (par. 2). Although this study conformed to these tenants of traditional policy research, that policies and programs are subject to political pressures (Birman & Kennedy, 1989), and contextual phenomena was also recognized. Internal and external political and relational contexts will not be ignored; their identification and inclusion will increase data and will contribute to accuracy with regard to analysis and conclusions (McLemore & Neumann, 1987).

Policy goals were identified and then compared to processes and accomplishments by the integration of contextual evidence. In order to do so in an unbiased manner, factual correctness and truthfulness was employed and judgments

about success or failure were avoided (Wallace, Cortner, & Burke, 1994). Following discussions of qualitative research methods that apply to the study and preliminary research objectives, the framework chosen to guide the collection and analysis of data, a case study is explained. Co-construction theory assisted in the identification and explanation of linkages among actors, politics, policy, and implementation. Within this chapter, methods employed to collect and analyze my data are discussed.

QUALITATIVE RESEARCH

The methods employed to generate evidence regarding implementation of T-STEM ECHSI policy were qualitative. The framework was case study analysis. As ECHSI and T-STEM guidelines were reviewed, specific, yet open-ended questions for interviews to inform research findings were written. Comparison of information gathered from fifteen administrative personnel at different levels in the hierarchy were meant to allow for “greater opportunity to generalize across several representations of the (phenomena)” of formulation and implementation, while also helping to establish conditions and context (Miles & Huberman, 1994, p. 51; Glaser & Strauss, 1967, p. 55; Yin, 1984, p. 108; Borman, Clarke, Cotner, & Lee, 2006, p. 123).

Borman, Clarke, Cotner, and Lee (2006) described four perspectives that inform methods employed in case study analyses; ethnography, qualitative, evaluation research, and mixed-methods approaches (p. 123). Understanding that these types of approaches can overlap in practice, design elements of two of the perspectives, qualitative and evaluation research, were both applied.

With regard to qualitative research design elements, this study can be described as conforming to standards of a collective instrumental case study (Borman, Clarke, Cotner, & Lee, 2006, p. 125). Instrumental case studies are designed to provide insight into issues (p. 125). TMECHS represents the merger of ECHSI, a nationwide phenomenon, with a T-STEM Academy model, a Texas state specific reform. Research results prove informative not only to stakeholders in El Paso, but to others across Texas and across the country.

Six documented characteristics of qualitative research were adhered to as research was planned and executed (Slavin, 2007, p. 122). "Direct sources of data" in natural settings (p. 122) were gathered by the researcher, "the key instrument" (p. 122). Documentation was reviewed and open-ended interviews were conducted with key personnel at three levels of administration, presidents, vice presidents, and superintendents, deans, liaisons and coordinators, and the school's principal. Because personnel engaged in conversations based on open-ended questions in non-structured interviews, responses were descriptive (p. 122), just as analyses of their insight became.

Because TMECHS is less than four years old and because research goals were to illuminate the phenomenon of translation of policy in implementation, this study is informed by several characteristics of qualitative research. One of these characteristics is a concern with process (Slavin, 2007, p. 122). Employing another aspect of qualitative research, using induction to analyze data, evidence was not analyzed to prove or disprove a hypothesis; rather to build an understanding by synthesizing data collected and applying that data to themes. This process, grounded theory, "emerges

from the bottom up (rather than from the top down), from many pieces of collected evidence that are found to be interconnected" (p. 124). A defining aspect of qualitative research is concerned with accurately capturing participant perspectives (p. 125). With permission, interviews were audio taped and transcript drafts were shared with informants. Slavin explains that this process of capturing participant perspectives enables researchers to discover not only what participants experience, but also how they interpret their experiences and "structure the social world in which they live" (p. 125), which is a key consideration in an investigation of implementation. A final defining aspect of qualitative research listed by Slavin and employed in this study is an awareness of the importance of context and the subjective perspective of the researcher. As a teacher at one of the early college high schools in the study, this researcher was diligent in continually acknowledging this subjectivity and "examining my own reactions to the phenomena being studied" (p. 125) so as not to allow previous experiences to influence analyses.

Once documentation had been reviewed to establish an understanding of the scope, breadth, and specificity of policy, the use of open-ended interviews with various levels of administration and staff was distinctive of qualitative interview technique. The interview process allowed the persons being interviewed to tell stories. Each informer was allowed to offer responses that were lengthy or abbreviated; subjects felt at ease and free to talk (Slavin, 2007, p. 131). Because "good open-ended interviews sound like conversations" (p. 132), subjects were treated like experts and their stories were received with care; I remained flexible, and asked for clarification when necessary (p. 132).

Triangulation is an important concept in qualitative research (Slavin, 2007, p. 133); case studies produce evidence from different sources, which in turn reduces bias, supports conclusions, and increases validity and reliability (Schwandt, 2001 in Slavin, 2007, p. 133). Not only did the study investigate evidence about and from TMECHS, different levels of administration interviewed represent a variety of sources to provide unique perspectives as well as depth in results for analysis and comparison.

In addition to the aforementioned aspects of qualitative research, tenants of evaluation research also informed my study, primarily aspects of evaluation research that coincide with those of qualitative research. This study is an evaluation in that it is linked to knowledge creation and will be “inextricably intertwined with politics and values” (Greene, 2000, p. 983 from Borman, Clarke, Cotner, & Lee, 2006, p. 126). Although this researcher was not interested in “making judgments about the value of a project, intervention, or policy” (Fitzpatrick, Sanders, & Worthen, 2004 in Borman, Clarke, Cotner, & Lee, 2006, p. 126), the research is “tied to particular contexts” (Borman, Clarke, & Lee, 2006, p. 126). In addition, policy reviewed based on official documentation prior to conducting interviews and analyzing data enabled descriptions of a “project under review” (p. 126) before evidence was gathered ethically.

Based on discussions by Borman, Clarke, Cotner, and Lee (2006) of evaluation research and summative evaluation, this study is organized to compare goals and parameters described in ECHSI and T-STEM documentation with the realities of implementation as described at various levels of administration (p. 127). To design and conduct a multiple-case study analysis of TMECHS venues at the school, and at the

partner institutions that would effectively address my purpose were identified and chosen.

Finally, with regard to evaluation research, the study was designed so that findings met four criteria, credibility, applicability, dependability, and confirmability (Lincoln & Guba, 1985 in Borman, Clarke, Cotner, & Lee, 2006, p. 128). Findings are credible because they are consistent with the lived experiences of informants (p. 128). Research results are applicable to the context studied and perhaps also to similar contexts nationwide (p. 128). Dependability refers to the idea that findings are “defensible and reasonable particularly with respect to the methods used” (p. 128). Finally, confirmability dictated that findings could be “logically linked back to the phenomena of interest via the analytic methods used” (p. 128). Diligence in adhering to these four criteria ensured that the results of the research would be useful (p. 128) to stakeholders of T-STEM and ECHSI.

CASE STUDY METHODOLOGY

Case study analyses framed the organization of this study. Case studies have an applied focus; researchers advocate eclectic and holistic research and advocacy with regard to policy and its implementation (Borman, Clarke, Cotner, & Lee, 2006, p. 129). The phenomenon investigated was the translation in implementation of policy in a relatively new context, the merging of secondary and higher education in a STEM focused school with merged administration, faculty, and staff. To build a case study, varied perspectives of several people involved were acknowledged, and resources, rights, and power were addressed (p. 129). Partnerships were developed with

informants to reveal insight into the translation of policy. Jacob and Jordan (1993) proposed defining characteristics of "the incorporation and application of the anthropological perspective in education" to guide research (Borman, Clarke, Cotner, & Lee, 2006, p. 130). These characteristics include holism, cultural relativity, a comparative perspective, and ethnographic research methods such as interviews in the educational setting. The principles of validity and reliability were diligently applied. Rigor was maintained, trustworthiness was emphasized, and research was conducted competently, ethically, and honestly. Finally, findings were analyzed carefully, and results were derived and presented based on rich descriptions and appropriate extrapolations from data (p. 130).

Taking policy and structure into account, iterative analysis was conducted (Borman, Clarke, Cotner, & Lee, 2006, p. 133). Analogous to a snowball effect, data collected via review of applications oriented subsequent waves of data gathering and analysis via interviews (Miles & Middlebrook, 2000, p. 285 from Borman, Clarke, Cotner, & Lee, 2006, p. 133). Interview questions were designed to fulfill research objectives related to specific issues in implementation regarding academics and questions were worded to prompt discussion and elaboration. By first investigating the scope and specificity of policy intent, a context for the examination of policy implementation was developed.

In a case study on culture and pedagogy, Alexander (2001) and his colleagues used a "priori set of seven major themes in the analysis of data at the school level: demography, structure, policy and control, goals, curriculum, assessment, and inspection" (Borman, Clarke, Cotner, & Lee, 2006, p. 135). Several of these themes

were applicable to my own study, such as demography, structure, policy and control, goals, and curriculum. In Alexander's study, cross-case analysis revealed that "districts varied in their approach to implementing the National Science Foundation reforms" (p. 137).

A seventh theme emerged in Alexander's study, which proved insightful for this study's analysis. The seventh theme was school culture, which in a comparable model "explained a large percentage of the variance associated with gains in student achievement" (p. 137). School culture is a powerful phenomenon that proved influential with regard to policy implementation at TMECHS.

In sum, having reviewed several methods that could be employed in case study analysis, ethnographic, qualitative, evaluation, and mixed methods, a combination qualitative and evaluation research, proved particularly appropriate for the purpose of the research. The overlapping steps taken to design and conduct the research were as follows:

1. Access official T-STEM ECHS policy documentation and review
2. Determine personnel to interview in several levels of administration at the grant funding agencies, at the independent school district, at the community college, and at the school itself (Grant administrators, college President and Vice President, ISD Superintendent; Deans, Liaisons, Counselors, and school Principal)

3. Conceptualize and write open-ended interview questions regarding academic issues that are similar for all levels of administration and can be cross-referenced in analysis
4. Submit proposals to institutional review boards at the University of Texas at El Paso (UTEP), the El Paso Community College (EPCC), the El Paso Independent School District, and Grant funding agencies Texas High School Project and Communities Foundation of Texas.
5. Schedule interviews
6. Conduct interviews, audio taping them
7. Transcribe interviews
8. Provide copies of transcripts to informants
9. Revise transcriptions where necessary based on informant input
10. Analyze interview data for themes, highlighting multi-directional relationships among actors and contexts
11. Schedule and conduct follow-up interviews where appropriate
12. Write up analysis of findings
13. Propose recommendations and topics or designs for future research

CO-CONSTRUCTION THEORY

Analysis of research and findings in this study were guided by the co-construction theory of policy implementation (Datnow, Hubbard, & Mehan, 2002). This theory supports an understanding of how policy stipulations and activities at various levels and by various administrators and staff members influence the implementation of complex and comprehensive policy; in the case of this study, T-STEM ECHSI goals,

requirements, and expectations. Decisions are made based on the input of several individuals involved in collaborative processes. Implementation is affected by the decisions and influences of these individuals, as well as of other individuals in the processes, such as staff, faculty, students, and families.

Co-construction theory grew out of the concept of mutual adaption by adding specificity to explanations of how interrelationships between not only actors within schools, but also across a social and political arena, can shape implementation (Datnow, 2006, p. 107). Snyder, Bolin, and Zumwalt (1992) explain that two traditionally dominant approaches to the organization of policy implementation analysis are the technical- rational and mutual adaptation models. The technical-rational framework places "a premium on planning, organization, command, coordination, and control" and presumes that "the causal arrow of change travels in one direction from active, thoughtful designers to passive, pragmatic implementers" (Datnow, 2006, p. 106). Because in following this model implementation is analyzed based on "fidelity to the policy design" (p. 106), any departure from the ideal is viewed as a "dilemma" (p. 106). The contrasting approach, mutual adaption takes into account the "dynamic conception of context" (p. 106), describing implementation as a process between actors and settings in which specific project goals only become concrete over time by the interrelationships of the actors (p. 106). The originators of mutual adaptation as a tool for policy evaluation were Berman and McLaughlin (Datnow, 2006, p. 107). They proposed that mutual adaptation was not only inevitable, but desirable because "negotiation, flexibility, and adjustment on the part of educators and reform designers

were keys to successful reform” (Snyder, Bolin, & Zumwalt, 1992 in Datnow, 2006, p. 107).

Just like mutual adaption, co-construction is very different from the traditional-rational perspective, suggesting that “reform implementation involves an active and dynamic interaction between local educators, the reform policy, and the social, organizational, and political life of the school” (Datnow, 2006, p. 107). But co-construction adds a layer of complexity because of elaboration and emphasis on the idea of multi-directionality (p. 107). Datnow (2006) writes that in co-construction models “multiple levels of educational systems may constrain or enable implementation and that implementation may affect those broader levels” (p. 107). Co-construction is thus not a top-down model, but is one that suggests a “causal arrow of change” that “travels in multiple directions among active participants in all domains of the system and over time” (p. 107). Hall and McGinty (1997) describe implementation as incorporating negotiation among many actors who “adjust to one another within and across contexts” (p. 4).

Datnow suggests that the most important aspect of the co-construction framework is the idea of a relational sense of context (p. 107). Even though in analysis, a researcher will inevitably afford some actors more influence in one context while setting others to the background, complete analysis is only possible if “the interconnections among contexts throughout the social system are described” (Sarason, 1997; McLaughlin & Talbert, 1993; Hall & McGinty, 1997 in Datnow, 2006, p. 107). All this means is that “people’s actions cannot be understood apart from the setting in which the actions are situated, and reciprocally, the setting cannot be understood without understanding the actions of the people in it” (p. 107). Further clarification of

this concept within the framework is offered by Hall and McGinty (1997) when they write that “a relational sense of context does not privilege any one context; rather it reveals the reciprocal relations among the social contexts in the policy chain” (Datnow, 2006, p. 107). No context is automatically assigned dominance as research and analysis is carried out. Relationships among contexts are always taken into account (p. 108).

FOUNDATION FOR THE RESEARCH QUESTIONS

A case study framework for qualitative research and co-construction theory guided the construction of specific, yet open-ended questions for non-structured interviews, so that documented policy and interview data could be compared, analyzed, and synthesized for emergent themes. While I was better able to conceptualize a line of questioning once I reviewed policy documentation, preliminary questions were formulated regarding the implementation of academic features of T-STEM ECHSI policy at TMECHS based on effectiveness benchmarks created by ECHSI and on the T-STEM Academy Design Blueprint Benchmarks. Because TMECHS is just in its second year of operation and concerns were about policy formulation and implementation in a unique school design that merges high school and college, it was the ECHSI beginning phase and implementing phase benchmarks that provided the ECHSI criteria used to incorporate into a case study research design (*Early College High School Initiative*, 2009).

While all of the benchmarks from both the ECHSI and T-STEM documents provided valuable insights, with regard to ECHSI, benchmarks concerning collaborative leadership, planning and coordination, student recruitment and selection, college credit

and degrees, mission, leadership, school culture and design, curriculum and instruction, continuous improvement, professional development, and policy were particularly informative (*Early College High School Initiative*, 2009). In the ECHSI benchmarks, collaborative leadership is defined as a partnership between the high school and the postsecondary partner. In addition to guiding question formulation, this benchmark was the foundation of the selection of participants and much of the policy documentation reviewed. Planning and coordination by the partners incorporates a variety of administrators and faculty from both institutions, as well as representatives from grant funding institutions, and is designed to “scaffold activities to ensure a smooth transition for students” (Beginning Phase, Planning and Coordination benchmark) (*Early College High School Initiative*, 2009).

ECHSI's student recruitment and selection benchmark suggests that partners develop and implement a recruitment plan that is “specific and appropriate to reach targeted students as described in ECHS Core Principles” (Beginning phase, student recruitment and selection benchmark) (*Early College High School Initiative*, 2009). This criteria set forth in this benchmark would be further specified by the merging of ECHSI with T-STEM for TMECHS.

The college credit and degrees benchmark in the ECHSI document dictates that “key stakeholders develop a well-structured plan for all students to complete a course of study that satisfies high school requirements and provides up to two years of transferable college credits or an Associate's degree” (*Early College High School Initiative*, 2009). The focus of this study concerned how that process unfolded and

looked in practice, which related to curriculum and instruction, is benchmarked by ECHSI with regard to expectations and performance standards.

ECHSI Mission and leadership benchmarks guided research objectives as they relate to how strategies for academic progress become processes ingrained in a school culture and design. That school culture and design is also benchmarked by ECHSI and incorporates significant aspects of the school day, the satisfaction of state, district and college requirements, and goals and support structures (*Early College High School Initiative*, 2009).

ECHSI professional development benchmark criteria prompted the incorporation of discussion regarding how teachers are selected and trained for service at an early college high school. In addition, how these teachers conduct business on daily basis would necessarily be impacted by academic policy and in turn would impact student progress and success.

The ECHSI benchmark regarding continuous improvement was foundational for the research design and objectives. This benchmark suggests that schools should conduct ongoing research on school design using quality and effectiveness indicators. In a qualitative study, policy and its implementation can be examined in depth to reveal impact not only on students, faculty, and staff, but on a variety of aspects of school design as well (*Early College High School Initiative*, 2009).

From the T-STEM Academies Design Blueprint, the following Benchmarks and their associated Program Requirements provided impetus and rationale for the broadly stated questions that became components in the interview grid:

- Benchmark 1: Mission Driven Leadership, Requirement 1.2 is Leadership.
Within this Program Requirement, the importance of a clear organizational structure, dependent not only on leadership and governance, but on accountability, collaboration, and continuous improvement is explained. And Program Requirement 1.3 Student Achievement sets out that T-STEM Academy staff and facilitators value ongoing formative evaluation for the purpose of monitoring implementation and effectiveness.
- Benchmark 2: School Culture and Design, Program Requirement 2.1: Personalization dictates that every student has an individualized graduation plan. Program Requirement 2.2 Culture includes the stipulation that all students have access and opportunities to engage in school activities. Program Requirement 2.3 Postsecondary success summarizes provisions found elsewhere in the Blueprint that the Academy creates university or college partnerships for mentoring, fostering a college-going culture, and the provision of college level courses/dual credit, and teaching training.
- Benchmark 3: Student Outreach/Recruitment, Selection and Retention, Program Requirement 3.1 Recruitment states that necessary support structures must be in place to allow participation by high-need students. Program Requirement 3.2 Open access specifies a lottery-based selection process with no admissions requirements except that a student be eligible to move from 8th to 9th grade. Program Requirement 3.3 Student Retention addresses the development of strategies to encourage persistence and student engagement.

- Benchmark 4: Teacher-Leader Selection, Development and Retention, Program Requirements address the need for highly qualified teachers that have autonomy over their classrooms, yet states as well that teachers should receive quality ongoing professional development (4.3).
- Benchmark 5: Curriculum incorporates Program Requirements that dictate a rigorous curriculum aligned to state standards (5.1), as well as the delivery of innovative curricular programs, extra-curricular activities, and internships (5.2).
- Benchmark 6: Instruction includes Program Requirements to ensure that teachers share responsibility and accountability for student learning across programs, content areas, and classroom (6.1.), that teachers employ a variety of instructional strategies (6.2), and that technology is integrated into the Academy culture (6.4).
- Benchmark 7: Strategic Alliances set forth Program Requirements for Parent and/or Family participation (7.1), and collaborative efforts between the high school and the community college (7.3).
- Benchmark 8: Academy Advancement and Sustainability, Program Requirement 8.3 Progress provided particular insight with its requirements for high expectations across a broad range of performance measures that would result in Academies being some of the highest performing campuses in the state.

(Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint, 2009).

The preliminary questions that eventually formed the foundation for the interview grid were broadly stated yet addressed specific policy and process concerns to help build a case study that examined the school's design in depth. Questions were:

- How are students recruited for and enrolled in TMECHS?
- How are students presented with options and requirements representative of the merged aspects of high school and college?
- How are parents involved in a variety of aspects of the early college high school experience?
- How are teachers recruited for and hired by early college high schools?
- What types of professional development are offered for administrators and teachers?
- How is college readiness measured and addressed in practice?
- How are students supported to develop college readiness skills?
- How is the encouragement of student motivation addressed in policy formulation and policy implementation?
- How are students prepared, supported, and monitored with regard to the rigor of college coursework?
- How are dual credit classes and associated requirements offered and coordinated?
- How are high school and college curriculums merged into individual degree plans?
- How are high school and college courses merged onto individual student schedules?

DEVELOPMENT OF THE INTERVIEW GRID

Questions needed to be broad enough to encourage and allow interviewees to discuss aspects of academic policy formulation and documentation that they were most involved in and about which they were most knowledgeable. Language was included to prompt discussions of not only formulations, intent, and outcomes, but operational issues, anticipated and unforeseen, as well that may have arisen and thus required rethinking of processes and thus re-visitation and negotiations by partners and stakeholders.

Questions were phrased differently with regard to policy formulation and policy implementation, and interviewees were given the option of addressing aspects of one or both question formats. Following are the questions posed to the interviewees.

Table 1 Interview Grid

<i>Academic Categories</i>	<i>Policy Formulation Questions</i>	<i>Policy Implementation Questions</i>
<i>Student Recruitment/ Enrollment</i>	How is policy formulated with regard to student recruitment and enrollment for TMECHS?	How are students recruited for and accepted into TMECHS?
<i>Academic Design</i>	What are major operational issues involved in formulating an academic plan for merging secondary and college components?	What are major operational issues involved in implementing an academic plan that merges secondary and college components?
<i>Family Engagement</i>	How are policies and programs designed to encourage and enable the engagement of parents and families towards students' academic	How are policies and programs designed to encourage and enable the engagement of parents

	achievement?	and families towards students' academic achievement implemented?
College Readiness	How are policies and programs designed to measure and address college readiness?	How is college readiness measured, addressed, and supported in practice?
Coursework and Support Structures	How are policies and programs designed to ensure rigorous yet supported academic programs?	What do high expectations and rigor look like at TMECHS and how are they supported?

INSTITUTIONAL REVIEW BOARD PROPOSAL

A proposal was submitted to the Institutional Review Board (IRB) at UTEP in September 2009 and included required contents and format. The goals of the project were described in the proposal's first section. The ultimate goal of the project was succinctly stated, to evaluate how ECHSI policy was translated in implementation at the TMECHS in El Paso, Texas with a focus on academics. In the proposal the fact that TMECHS was a T-STEM early college high school was not referenced, but that omission did not change the basic goals and design of my study and so did not negatively impact the course of the research.

It was after the proposal had been submitted and conditionally approved that the benefit of incorporating documentation review and interview discussions regarding T-STEM input and influence was realized as necessary for the development of a case study on TMECHS. Because the grant funding agencies, THSP and CFT provided funds based on TMECHS being a T-STEM early college high school, their inclusion in

the proposal covered an allowed me to access and review documentation and conduct interviews that would address the T-STEM aspects of the school's academic designs. Overall, the proposal explained that contexts and interrelationships among various levels of administration and staff, external and internal politics, school design, and school culture in the analysis of data would be taken into account.

The problem statement was discussed in a brief section entitled Background and Significance. TMECHS opened in August 2008 and would be beginning its second year of operation at the time of the proposal. ECHSI policies for the school had been decided upon and written into official documentation based on the core values and criteria in the policy, federal and state public school and higher education requirements, El Paso Independent School District (EPISD) policies, and El Paso Community College (EPCC) policies. TMECHS was being organized and run based on interpretations of policy by local partners and administrators, on organizational and cultural constraints, and on a variety of ongoing and reflective decisions. Processes were being led by individuals in positions of authority and carried out by staff and faculty (*Early College High School Initiative*, 2009). It was proposed that partners, administrators, staff, and faculty associated with TMECHS could benefit from an evaluation of their experiences. Knowledge and insight revealed might help guide them in the school's development and improvement in key areas. Insight gained from a qualitative study might also not only be beneficial to stakeholders of TMECHS in El Paso, but be useful for those involved in other El Paso early college high schools and the initiative nationwide, as well as other secondary schools. If policy implementation did not match policy documentation in its ideal formulation, evaluation of that implementation might serve to illuminate why

changes occurred or even provide evidence that policy modification would be beneficial within the dynamics of a the new school settings that early college high schools represent. If successful methods and strategies could be identified, documented, and then proven replicable, TMECHS programs and practices might serve as exemplary models for other schools.

ECHSI core values and criteria that direct early college high school partners and administrators to provide a rigorous, academic education and college preparation for those who might otherwise not pursue and achieve that goal were discussed. Because the initiative accelerates the pathway to a college education for those underserved and underrepresented for whom the financial burdens of a college education can be prohibitive, by redesigning high schools to incorporate up to two years of college coursework, because two previously distinct branches of the education pathway, secondary schools and institutions of higher education are merged into one, with teenagers taking college classes while still in high school (*Early College High School Initiative*, 2009), the dynamics of those mergers and their impact on implementation is worthy of investigation. Later, as research progressed, the addition of T-STEM principles and requirements proved to enhance the rationale and value of the study proposed.

The rationale for the study's design was explained. Policy documentation and interviews with high-level administrators would be pursued to provide representations of the ideal, policy as directed and expected was proposed. Data collected from interviews with administrators and staff at various levels in the school's organizational hierarchy would be conducted in the hopes of revealing how that policy was decided upon,

formulated, and implemented. Review of written policy and interviews were meant to first establish a comprehensive understanding of the scope, breadth, and specificity of policy and to guide me through the interview process and in the analysis and synthesis of research findings. Analyses of information gathered at the school from various personnel at different levels of administration would be compared. Comparison of information would then “allow for greater opportunity to generalize across several representations of the phenomenon”, while helping to establish conditions and context. (Miles & Huberman, 1994, p. 51; Glaser & Strauss, 1967, p. 55; Yin, 1984, p. 108; Borman, Clarke, Cotner, & Lee, 2006, p. 123)

Participants and Procedures were discussed. The names, positions and organizations of administrators with whom qualitative interviews would be conducted were listed and guiding questions were discussed. Research methods and protocols were proposed, including procedures for recruitment and informed consent, and how participants’ confidentiality and safety would be ensured.

A copy of the Institutional Review Board Proposal is attached as **Appendix K**. Attached as Appendix L is a copy of the informed consent document that all participants received, reviewed, and signed in agreement with the goals and requirements of the study.

Because TMECHS is organized and facilitated by several partners, organizations, and funding agencies, the individuals specified for interviews had various employers. The IRB therefore initially granted conditional approval on September 16, 2009; letters of support/approval from each of the organizations that were ultimately

responsible for the proposed participants were secured. The IRB letter granting conditional approval is attached as Appendix M. Letters of support/approval from the El Paso Independent School District (Appendix N), El Paso Community College (Appendix O), Communities Foundation of Texas (Appendix P), and Region XIII (Appendix Q) were requested, received, and submitted to the IRB. Full approval was granted on November 3, 2009 (letter attached as Appendix R).

METHODS OF DATA COLLECTION

Some policy documentation was reviewed before full approval was received from the UTEP's IRB as much of it is in public domain. Once full approval was received, copies of grants and outcomes documentation were requested and interviews were scheduled. Except for two telephone interviews, most interviews were conducted in person and took one to two hours each. Within a week of each interview, tapes were transcribed and copies were sent to individual participants by email to review and amend if they saw fit.

The goal of the open-ended interview technique was to learn about academic policy based on a variety of perspectives and knowledge bases from administrators involved in the processes of academic policy formulation and implementation. Participants were selected because each had different responsibilities with regard to oversight and processes. Participants targeted included the vice president and president of the college, the school's principal, deans and liaisons at the college, the chief of staff in the superintendent's office at the independent school district, and administrators at the grant funding agencies. The question grid had been designed to allow for interviews to progress from generalities to specifics and so that participants

could influence the content and pace of the interviews (Strauss & Corbin, 1990). To ensure accuracy, the interviews were transcribed verbatim before being provided to individual interviewees for review to be sure that comments retained their original and intended content.

DATA ANALYSIS PROTOCOL

There are five recommended steps when analyzing data. One should read all data to get a sense of the whole, break down the data to generate topics, compare the information to reduce duplication, develop a preliminary classification system, and refine the classification (Gay & Airasian, 2003). These steps were used in analysis, as well as in the sorting out of dominant themes that would frame and support the synthesis of information gathered.

In qualitative research information gathered is divided in relevant parts and units. This process of reduction, although executed with a holistic perspective, helps in the analysis of large amounts of information that could otherwise be difficult to handle, process, and evaluate (Gay & Airasian, 2003). In this manner qualitative methods reveal insight into participants' perspectives (Gall, Borg, & Gall, 1996; Gay & Airasian, 2003).

Data were gathered from policy documentation and guidelines and through interviews. After collecting the data, certain themes emerged that were common to many participants and that seemed to the researcher critical for the development and implementation of academics as the school continues to grow. Interpretation and synthesis was the final stage where assertions were made regarding the common and emergent themes. In chapter 5, information is presented in narrative form with discussions of emergent themes embedded throughout (Creswell, 1998).

Validity

Validity was addressed in this study by the incorporation of multiple data sources. In addition, data collected was taken to be truthful and was written in findings and analysis in a truthful manner. Policy documentation was reviewed to establish an understanding of the variety, scope, and depth of policy and guidelines. Interviewees were provided verbatim transcripts to review to verify responses as recorded and as outlined in the consent form. Although this researcher teaches at the setting of the study, TMECHS, she has remained unbiased.

Triangulation

Triangulation is the use of multiple research methods as a way of producing more reliable empirical data than is available from any single method (Bogdan & Biklen, 2003). Employing multiple methods and data sources enables a deeper, wider understanding of a phenomenon (Bogdan & Biklen, 2003). In this study, sixteen participants were interviewed using the same criteria and question set. Interviews were tape recorded to allow for thorough and multiple examinations. And several policy documents were reviewed and related to the interview data.

The methods of data collection employed allowed me to examine the research questions from multiple perspectives. The multiple data sources permitted me to draw conclusions and make determinations regarding the formulation, implementation, and effectiveness of academic policy and processes at TMECHS. This triangulation helped to enhance the validity of my findings.

Reliability

In qualitative studies, Merriam (2002) cautions, reliability is problematic because human behavior is not consistent. Reliability often relies on the assumption that repeated measures and methods produce similar results. Yet because human behaviors are not static, in qualitative research, reliability may be better applied in terms of dependability.

While quantitative research methods are primarily intended to test theory with researchers working deductively in outcome orientated fashion, qualitative researchers are concerned with the meaning of phenomena and lived experiences. Because the meaning of processes are often not readily observable, qualitative researchers pay attention to the social contexts in which events occur and emphasize understanding the social world from the point of view of the participants in it.

The reliability criterion for qualitative research focuses then on identifying and documenting recurrent accurate and consistent (homogenous) or inconsistent (heterogeneous) features as patterns, themes, world views, and any other phenomena under study in similar or different human contexts. In this study patterns, themes, and perspectives were extracted from multiple interviews and policy sources. In this study, emergent themes are based on the cross-referencing of multiple data sources. These emergent themes were chosen because of their recurrence and consistency throughout the data collected (Labuschagne, 2003).

Ethical Concerns

Ethical considerations were consistently applied throughout the processes of the research. Participants were provided with a description of data collection methods and

the purpose of the study. A detailed informed consent document was reviewed with each participant prior to his or her signing of same before interviews commenced. Informants were apprised of the voluntary nature of their participation and that at any time they could withdraw that participation if they so desired and were advised that there would be no adverse consequences for not participating in the study. Participants were given the option to remain anonymous, to be referred to by position title only, or to be referred to by name. At no point was compensation offered or inferred during the course of the research.

IRB proposal submission and approval also serves to protect the rights of the participants in this study. There were no risks involved to the participants in this study. Participants were advised that neither their participation nor the study results would negatively impact them, the school, or their respective organizations.

The following measures were taken to ensure that data collected was secure:

1. Data collected during the study were stored in a location to which only the researcher possessed accessibility.
2. Data that could compromise the confidentiality of participants, students, and other staff, faculty, parents, and other community members were destroyed upon the completion of the study.
3. Interview appointments were undisclosed.

Again, because the researcher was the primary data collection instrument, the issue of researcher bias was a foremost concern. Certain experiences and expectations were

acknowledged and biases did not influence the interview process or the analysis and synthesis of information towards themes and correlations. Progress was discussed with the dissertation chair to ensure that no assumptions or preconceived notions showed evidence of bias.

Limitations

Limitations on this study have to do with the school having been open for less than two years. Processes are in the early stages of implementation and partners, administrators, and staff members are all new to running an early college high school.

CHAPTER FOUR

TMECHS PROFILE

INTRODUCTION

Transmountain Early College High School (TMECHS), a collaborative effort between the El Paso Community College and the El Paso Independent School District, and guided by the Bill and Melinda Gates Foundation via the Communities Foundation of Texas and the Texas High Schools Project, is located on the Transmountain Community College Campus in Northeast El Paso, Texas. The facilities of TMECHS consist of two permanent buildings, a cafeteria and a science building. Numerous portables are set up as classrooms, administration buildings, a teacher's lounge, a bookroom, and a nurse's office. Due to its location on the Transmountain EPCC campus, students are aided in their transition from high school to college. The ability of TMECHS students to fully utilize all of EPCC's facilities is an additional unique component not found in traditional high schools. TMECHS students are issued a college identification card to maximize their use of EPCC facilities (personal communication, TMECHS Principal, 9 November, 2009).

There are several other notable aspects of TMECHS, including its size, eligibility, and focus on academics. The school's small size (no more than 125 students per grade) is an intentional component of the academic designs of both T-STEM and ECHSI because it provides students with the opportunity for individualized attention. Any incoming high school ninth grader who resides in EPISD is eligible to apply to TMECHS. Because the focus of the program is primarily on teaching and learning,

athletic teams are not part of the school design. However, there is a fine arts program that includes so far music and guitar, and students can take courses such as theater and dance at EPCC (personal communication, TMECHS Principal, 9 November, 2009).

In the case of TMECHS, the grant funding institution, the Texas High School Project/Communities Foundation of Texas doubled the amount of money initially provided from \$400,000 to \$800,000 because TMECHS would be both T-STEM and an Early College High School (personal communication, EPCC Vice President, 12 January, 2009). Ramifications of the merged aspect of the school are evident in several areas of the school's design, such as in how T-STEM stipulations as to students are to be recruited and enrolled, course sequences and individual degree plans, and the embedding of summer research institutes, project-based learning, and a senior project into the curriculum.

Initial planning for TMECHS began in 2007. The school opened in August 2008 with 125 ninth graders. As of the spring semester of its second year in operation, TMECHS has 113 ninth graders and 101 tenth graders (personal communication, TMECHS Principal, 9 November 2009). Each of the two cohorts started with 125 students; however, for various reasons, some students have left, either returning to their home school, or because their families have moved within or from El Paso.

TMECHS students have rights and responsibilities that reflect both their status as high school students and college students. As public school students who have not yet graduated from high school, TMECHS has responsibilities to them pursuant to the concept of *in loco parentis*, the Latin phrase which means that while a student is in the

custody of a school, the school can and is often expected to act as a parent (U.S. Constitution Online, 2010)

While high school students are encouraged and expected to take responsibility for their learning and actions, parents are routinely apprised of their academic progress and are actively engaged in their children's school life. Teachers make parent phone calls when a student is having difficulty or has done exceptionally well and parent-teacher conferences are scheduled once per semester (personal communication, TMECHS Principal, 9 November, 2009).

As college students, however, the children enrolled at TMECHS are treated differently based on the Family Educational Rights and Privacy Act (FERPA), a set of federal regulations concerning the privacy of citizens that was established in 1974 and applies to most colleges and universities. FERPA is administered by the Family Policy Compliance Office (FPCO), part of the US Department of Education in Washington, DC. Even though TMECHS students have not yet graduated from high school, in some ways they are no longer children in the eyes of society and the law. In certain respects, they have become fully responsible adults, with associated rights. Becoming accustomed to the postsecondary environments of the merged campus, including the college classrooms, library, and gym, there is somewhat of a transition required for both the students and their parents. College professors speak only to the students in their classes, not their parents, and do not alter this routine because a student is still in high school (College Parents of America, 2004-2010).

FERPA is designed to make certain guarantees to students about the privacy of their education records. In the context of those regulations, the guarantees are made specifically to postsecondary students, whom FERPA acknowledges as fully responsible adults. FERPA makes four guarantees to postsecondary students;

- the right to inspect and review education records
- the right to seek to amend education records
- the right to have some control over the disclosure of information from those education records
- the right to file a complaint against any institution for the alleged violation of these FERPA rights (College Parents of America, 2004-2010).

Notable for this discussion is that the guarantees are made directly to the student, not to the parents, nor to any guardians of the students. For the most part, the student is the only individual who can authorize access to her student records. With regard to the college classrooms, the parents of TMECHS students no longer have a right to access the student records without the students' signed, written consent to do so (College Parents of America, 2004-2010) .

Colleges and universities comply with these regulations by dealing exclusively with the student. Bills for tuition are an exception. Since student bills are financial records, involving yet another set of regulations, institutions are allowed to communicate with parents about financial records if the student authorizes the school to do so. Such authorization, however, applies only to financial records and may never include academic or other student records. But since in the case of the early college high

schools, college tuition is waived and textbooks for college classes are purchased by the school district, this is not an issue for TMECHS (College Parents of America, 2004-2010).

PARTNERS

The El Paso Community College District was established in June 1969 and began operations in September 1973 with 902 students enrolled in leased facilities at Fort Bliss. In 1974, the college expanded into downtown El Paso, having bought buildings with the help of a Project Hope grant. As of 2008, 85.5% of the college's enrolled students are Hispanic with 70% first-generation college students (Rhodes, 2008 from dissertation by Melinda)

There are five EPCC campuses to date. The college also has an administrative services center, and four educational/occupational outreach centers serving the military, the homeless, and career and business development needs of the district. Campuses and service centers are located strategically in population centers throughout El Paso. Campuses and service centers include the Northwest Campus (north), the Rio Grande Campus (northwest) the Administrative Services Center and Fort Bliss (central), the Career Training Center and Valle Verde Campus (south-central); the Lomaland Center and Mission Del Paso Campus (east); and the northeast Transmountain Campus (El Paso Community College, 2008).

On its web site, the El Paso County Community College District is described as a growing, dynamic, and innovative multi-campus system serving over 28,000 students each semester in the city of El Paso, characterized as a flourishing West Texas

metropolis of over 825,000 people. EPCC awards more associate degrees to Hispanic students than any community college in the country, offering over 130 academic programs and 350 continuing education courses. EPCC is also the leading provider of training for local business and industry in El Paso (El Paso Community College, 2008).

EPCC is a partner in four early college high schools to date. Transmountain Early College High School (TMECHS) in the El Paso Independent School District, is one of the four ECHS partnerships and opened in August of 2008. Mission Early College High School (MECHS) is in the Socorro Independent School District (SISD) and opened in August 2006. Valle Verde Early College High School is part of the Ysleta Independent School District (YISD) and opened in August 2007. Northwest Early College High School, part of the Canutillo Independent School District, opened in August 2008.

In the El Paso/Juarez border region with a combined population of 2.3 million people, El Paso 708,000 and Juarez 1.6 million, the El Paso Independent School District (EPISD) is the largest district in the TEA's Educational Service Center - Region 19. With more than 63,000 students on 92 campuses for grades K-12, EPISD is the seventh largest district in Texas and the 57th largest in the United States. EPISD is considerably larger than the next two largest independent school districts in El Paso, Socorro with 36,737 students, and Ysleta with 46,036 students. EPISD is El Paso's largest employer with nearly 9,000 employees and has an annual operating budget of \$446 million. Organized in 1883, EPISD is not only a large district, but one with a long history (*District Information, 2010*).

Today, of EPISD's approximately 64,000 students, 79% are Hispanic, 15% White/non-Hispanic, 5% African American, 1% Native American, and 1% Asian/Pacific Islander. 70% are economically disadvantaged; 30% are coded Limited English Proficiency; 7 % are from military families; 2% are from migrant families; and 62% are considered At-risk. 51% of EPISD's students are male, leaving 49% female (Enrollment Statistics, 2010).

VISION AND MISSION

During the school's first year of operation the first cohort of students worked together to create the school's motto, mascot, and colors. After deliberations and voting, the student body agreed upon their choices and submitted them to the independent school district for approval. "We strive for truth, knowledge, and success on the pathway to higher education" was ultimately chosen and approved to be the school's motto. The school's mascot is the Maverick, representing the students' abilities to exhibit independent thought and action, courage, and perseverance. The school colors are black, turquoise, and silver (*Transmountain Early College High School*).

The school's vision and mission are introduced on the school's web site in a discussion of the unique educational opportunity that TMECHS provides. The school is described as having focus that concentrates on "increasing the number of first generation students attending college; increasing the number of students who are members of under-served populations who attend college; and...increasing college enrollments for students meeting low SES qualification" (*Transmountain Early College High School*). The school is noted to be "designed to provide students with a rigorous

course of study focused on T-STEM model" (*Transmountain Early College High School*), by redefining the "typical comprehensive high school experience into an academic oriented small school setting" (*Transmountain Early College High School*).

TMECHS Vision Statement reads as follows:

To provide a nurturing and supportive environment which enables EVERY student selected to attend the Early College High School to:

1. successfully complete his/her high school diploma
2. obtain an Associate's Degree
3. transition to a 4-year college or work setting with the skills to be successful in the path of his/her choice
4. become an independent learner and positive contributor to the community (*Transmountain Early College High School*)

The school's Mission Statement is:

The Transmountain Early College will provide a select population of EPISD students a unique educational opportunity to attend both high school and college in a special campus environment that will challenge students to excel in their academic and personal endeavors. Students will have the opportunity to earn a high school diploma and a two year Associates Degree upon graduation.
(*Transmountain Early College High School*)

POLICY AND GUIDANCE

School operations are guided by various policies, standards, agreements, and state and local requirements. Some of these guidelines are broad in nature, while others incorporate specifics. Grants, State statutes, district standards, and memorandums of understanding provide a framework for the school's policies, and agreements between the partners set down rules and regulations for implementation.

COLLEGE AND CAREER READINESS STANDARDS

EPISD has created a set of standards to promote the development of college and career readiness in all of its students. The district describes college and career readiness as “an entire educational system focused on the goal of ALL students graduating from high school fully prepared to participate in postsecondary education and the highly skilled workplace, an educational experience incorporating reading, comprehension, reasoning, problem solving and interpersonal skills preparing ALL students to be college ready; career ready; life ready” (*El Paso Independent School District*). Core values, the means to the end are incorporated in this definition:

- Focusing on the whole child
- Focusing on partnerships with community
- Focusing on continuous academic improvement, and customizing instruction and instructional opportunities. (*El Paso Independent School District*)

TMECHS is guided by the five components EPISD sets out for all of its schools with regard to college and career readiness for all students. The five components are building a college and career ready culture, establishing post-secondary access for all

students, examining and applying college readiness data, developing a strong college and career readiness curriculum, and restructuring schools. Within the component of building a college and career ready culture is college course planning and a support structure that includes the AVID curriculum. Post-secondary access is a reality for the students as they pursue dual credit classes to achieve an associate's degree by time they graduate with a high school diploma. Students utilize the Princeton Review in addition to workshops during summer bridge programs and throughout the school year to master skills and knowledge necessary to pass college readiness tests such as ACCUPLACER. Data analysis is ongoing to ensure that students are afforded appropriate support to be successful at college readiness tests, in high school coursework, and in college credit classes. All TMECHS students are on the Distinguished Achievement Plan for a high school diploma in addition to taking appropriate dual credit courses to earn an associate's degree in four years. Finally, in addition to having a unique small learning community school structure with high expectations, the early college high school incorporates teachers providing advisory lesson plans on a weekly basis (*El Paso Independent School District*).

ACADEMIC POLICY DOCUMENTATION

Communities Foundation of Texas/Texas High School Project Grant

In response to a proposal dated March 15, 2007, and dated July 7, 2007, Grant Agreement (07-D-005407) outlines terms and provisions expected in exchange for up to \$800,000. The value of the grant doubled from approximately \$400,000 to \$800,000 based on the merge of an early college high school with a T-STEM Academy model (Brown, find the location in the transcript). The Funding source is listed as The Texas

High School Project Fund (THSP) of Communities Foundation of Texas (CFT). THSP is the administering organization, responsible for guidance and oversight and the El Paso Independent School District (EPISD) is the recipient of the funds, responsible for ensuring that the terms and provisions set forth were adhered to and reported on. As recipient, EPISD took on the responsibility of collaborating with THSP and CFT to satisfy grant requirements and implement a framework for program evaluation. Because TMECHS is the product of a partnership with EPCC, communication and processes need to be transparent and ongoing so that EPISD represents not only their own organization, but EPCC as well (Communities Foundation of Texas/The Texas High School Project, 10 July, 2007).

The Designation/Other Conditions of the Grant section awarded the funds to the activities of design and implementation of a Texas Science, Technology, Engineering, and Mathematics (T-STEM) Early College High School (ECHS). By accepting the funds, EPISD agreed that their operation would be consistent with the goals and objectives of THSP and its major foundation funding partners, the Bill & Melinda Gates Foundation, the Michael & Susan Dell Foundation, and Communities Foundation of Texas. 100 students per grade level would be served in a school designed for students in grades 9-12 that was not only innovative with integrated, applied math and science teaching and learning, but that aligned with "the mission of the ECHS initiative to make higher education more accessible, affordable, and attractive by bridging the divide between high school and college; providing needed guidance and support from adults through the first two years of college; facilitating the transition of motivated students to higher education; and demonstrating new ways of integrating levels of school design to better

serve the intellectual and developmental needs of young people” (Communities Foundation of Texas/The Texas High School Project, 10 July, 2007).

An implementation proposal was required that outlined how TMECHS would design and implement a T-STEM ECHS. Deliverables specified were narratives explaining budgets, funding streams, staffing plans, curriculum and course roll out, plan for students to acquire 60 college credit hours, and memorandums of understanding between partners. Quantitative targets were required for evaluative measures of enrollment, dual enrollment, attrition, attendance, graduation, and matriculation (Communities Foundation of Texas/The Texas High School Project, 2007).

EPISD was required to satisfy a number of processes so that the Foundation would continue to incrementally roll out funding over a two year period. They had to first formally institutionalize the program via a memorandum of understanding with EPCC. Once the program was in operation, TMECHS was required to achieve “Recognized” or “Exemplary” standing as a high school based on TAKS scores and/or end-of-course scores as mandated by the Texas State legislature. College credit completion was to be documented on a yearly basis. Curriculum and course sequence had to be clearly defined and modified if necessary to enhance effectiveness. Evidence of successful T-STEM project completions and web postings was required. 100% of the school’s students would have to complete an internship by graduation. Ultimately, of graduating seniors, 95% would have to be accepted into a four-year college or 100% of those who opted to earn a terminal associate’s degree would have to acquire a job upon graduation (Communities Foundation of Texas/The Texas High School Project, 10 July, 2007).

A copy of the grant is attached as Appendix A and includes the funding timeline as long as conditions were met, and specifics regarding evaluation and accountability formats and associated requirements.

T-STEM Academies Design Blueprint

The Texas High School Project (THSP) wrote the Texas Science, Technology, Engineering and Mathematics (T-STEM) Academies Blueprint in 2006 to be a basis for T-STEM Academy design. National experts in the fields of school and curriculum restructuring reviewed and approved of it. Schools began following the model beginning in the 2006-2007 school year. The purpose of T-STEM academies is to “increase student achievement by engaging and exposing students to innovative science and math instruction” that challenges them to innovate and invent. Students are taught in an environment that allows them to demonstrate an understanding of math, science, technology and engineering in real world contexts. Based on feedback from the first Academies, THSP is currently in the process of redesigning the Blueprint so that it is clearer and easier to use (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Because TMECHS is a T-STEM Academy and guided by the T-STEM Blueprint, its high school curriculum is aligned with “the admission requirements of competitive colleges and the qualifications needed to succeed at today’s high paying jobs” (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009, p. 1 of 9, paragraph 2). While TMECHS enables students to earn an associate’s degree and a high school diploma, the expectation is that they will go on to pursue a bachelor’s degree and higher once they graduate.

The blueprint introduces and explains Benchmarks, Program Requirements, and Indicators to guide schools in developing individualized academy implementation plans. In addition to following these guidelines, progress is reported based on them so that the Texas Education Agency (TEA), THSP and Communities Foundation of Texas (CFT) T-STEM staff can evaluate the progress of the Academy during planning and implementation. There are eight benchmarks that cover a wide range of operating issues, from admissions and recruitment to strategic alliances. Within each of these benchmarks are program requirements that discuss the manner in which an academy will provide the means for access and excellence. While there is considerable explanation and specificity, except for services provided by THSP such as professional development models, the development of processes is left to the academies (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 1 is Mission Driven Leadership and has three program requirements, Academy design blueprint and implementation plan, and Leadership, and Student Achievement. This benchmark focuses on building a sound school infrastructure and implementing high and consistent learning expectations and performance standards for diverse learners. In order to do so, internal and external measurement tools are expected to be used within a clear organizational structure that demonstrates accountability and collaboration for continuous improvement. Clear processes for program review and evaluation are developed and decisions are driven by data and integrated into day-to-day operations (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 2 is School Culture and Design and is divided into Personalization, Culture, and Postsecondary Success. Like the early college high school design, T-STEM academies are meant to remain small, approximately 100 students per grade, with individualized graduation plans by student. Academies are charged with writing their own comprehensive handbook that details procedures, policies, and consequences for the entire school community, while also being designed to hear and respond to student voice. Design aspects of this benchmark include the idea that students will graduate prepared to pursue post-secondary coursework and careers in science, technology, engineering, and math by creating university or college partnerships for mentoring, fostering a college-going culture, and the provision of college level courses/dual credit, and teacher training (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 3, Student Outreach/Recruitment, Selection and Retention, is broken out into Recruitment, Open Access, and Student Retention. Highlighted in this benchmark is the idea that academies develop a process for marketing and recruitment that enables them to reach high need and underrepresented students. Under this section in Program Requirement 3.2, Open access, the Blueprint sets out its requirement that a lottery-based selection process be developed to serve the target populations. This benchmark states that application for the lottery must not include “onerous requirements that might deter all but the most motivated students” or “requirements for grades, TAKS scores, requirements, discipline history, or teacher recommendation” and sets the minimum for disadvantaged or majority minority at 50% of the student population. In addition, this benchmark requires schools to develop strategies to encourage persistence that

incorporate outreach efforts, interventions, and supports for students, content-coaches for staff (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 4, Teacher-leader Selection, Development and Retention, is divided into Highly qualified teachers, Professional development, and Teacher retention. This benchmark addresses the need for highly qualified faculty who demonstrate success with high-need students and innovative programs. Continuous and sustained learning opportunities for teachers and faculty are required and provided by THSP and should be designed to be prioritized by need and informed and evaluated by instruction, assessment, and data. While the model states that it provides teachers autonomy over their own classrooms, systems are built in for results-driven, team-focused professional learning and collaboration (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 5, Curriculum, is divided into Rigor and STEM curriculum and sets forth the requirement that academies develop detailed curriculum scopes and sequences for core disciplines. This benchmark outlines program requirements of a T-STEM curriculum, which include alignment to state standards, contextual learning opportunities, global perspectives, accelerated student achievement, extra-curricular activities centered on the STEM areas, and internships (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 6, Instruction, is broken out into Shared practices, STEM education integration, Literacy plan, Technology integration, and Assessment. Shared practices

mandates several best practices, such as data-driven instruction, accountability, implementation of scope and sequence, and clear expectations. Under education integration, academies are expected to challenge students to innovate and invent, use problem-based and project-based learning strategies, and create an environment that models real world contexts for learning and work. Faculty should be committed to all students becoming competent readers, writers, and speakers. Technology is integrated into the culture, curriculum, teaching strategies, and daily of operations of students and staff. Finally, student information systems should comprehensively track student progress (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 7, Strategic Alliances, is divided into Parent and/or family participation, Business and school community, and Institutions of higher education. To develop and maintain strategic alliances open communication must be open and ongoing with responsibility for student performance shared by the school, the students, and the parents. Collaboration with institutions of higher education and community partners is also critical to the success of the academies to provide the delivery of college credits and to expose students and teachers to career opportunities in the STEM fields (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Benchmark 8, Academy Advancement and Sustainability, is divided into Sustainability, Strategic planning, and Progress. Budgets are required to be strategic, balanced yearly, and reflective of funding commitments. High expectations must be set with a broad range of performance measures incorporated into planning and

implementation processes. Goals, objectives, and accomplishments must be documented (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

The complete Blueprint is attached as Appendix B. While the above descriptions show much of the document's intent, a review of the entire document reveals the depth of the mechanisms and expectations inherent in it.

Interlocal Agreement

An Interlocal Agreement between EPCC and EPISD satisfied the memorandum of understanding requirement referenced in the Foundation grant that provides the framework for TMECHS to enroll qualified students at EPCC for college level credit. The term of the current agreement is May 1, 2008 – April 30, 2013. Areas addressed include location on the college campus, operations and sustainability, school size, and curricular design. The agreement notes that the school's initial grant funding is for up to four years, after which the parties in the agreement assume total responsibility. Requirements outline that the school will ultimately house no more than 500 students and that all students will earn a transferable associate's degree and a high school diploma in four years. Staffing issues are addressed. The provision of buildings and other site considerations are also stipulated.

General rules and responsibilities are divided between EPCC and EPISD. EPCC has responsibility for providing land for portable and modular buildings and site preparation, for providing utility lines and skirting for portable buildings, and for assisting with the development of the dual credit college (high school) curriculum. EPISD is then

responsible for recruiting students, hiring and supervising staff, providing and transporting portable classrooms and modular buildings and hook-ups for installation, developing the high school curriculum, and operating and managing the school.

The creation of a steering committee comprised of EPISD and EPCC staff for planning purposes is also stipulated in the interlocal agreement. The provision is broadly stated so that any issues that may arise with respect to the conduct of the program could be addressed by the committee. Several examples are listed as well: operational processes, curriculum processes, curriculum, technology and recruitment, external funding, facilities, marketing, research, and effective coordination.

The interlocal agreement establishes the fact that EPCC waives tuition and designated fees for students enrolled in the Concurrent Dual Credit Enrollment Program. Students are then bound by requirements set forth in the EPCC Concurrent Dual Credit College Enrollment Program in which EPCC is responsible for providing credentialed course offerings as configured and agreed to by both EPISD and EPCC, using both the facilities and faculty of TMECHS as well as EPCC facilities and faculty when needed. TMECHS faculty members who teach dual credit are not only certified to teach in the public school, but are also credentialed to teach college courses at EPCC. When teaching dual credit, high school faculty do not receive any monetary compensation from EPCC for their service. Although then high school instructors teach courses on a voluntary basis, they are entitled to all the rights and privileges accorded any EPCC part-time faculty member. A copy of an interlocal agreement is attached as Appendix D.

EPCC Procedure: High School Dual Credit Program Requirements

Several stipulations in EPCC's board policy 6.00.01.30, High School Dual Credit Program Requirements, approved October 31, 2003 and revised January 26, 2007, impact how students at TMECHS are enrolled in courses for college credit. The objective of this policy was to establish procedures for the implementation of the college's implementation of dual credit in El Paso's high schools. Responsibilities of the high schools and EPCC regarding program development and students services are specified in compliance with State educational rules under Texas Education Code Section Chapter 9, Subchapter H Partnerships between Secondary Schools and Texas Public Two-year Associate Degree-Granting Institutions. A Dual Credit Standing Committee is charged with reviewing procedures annually and providing recommendations for change to the college's Vice President for Instruction for approval. Per this policy, interlocal agreements must be in place before institutions can offer courses that grant credit toward a student's high school curriculum requirements and college-level credit (*El Paso Community College Procedure*, 26 January, 2007).

A copy of High School Dual Credit Program Requirements is attached as Appendix E. Within it are outlined procedures, timelines, student eligibility requirements, high school requirements, EPCC requirements, and admissions and registration processes, including testing and counseling, financial aid, and distance education services (*El Paso Community College Procedure*, 26 January, 2007).

Under the General Requirements section IV, regulations and limitations are placed upon the provision of college courses as Dual Credit offerings. Any course offered must be in the EPCC approved course inventory and must pertain to the high

school curriculum. Dual Credit courses must be equivalent to the corresponding course offered at EPCC with respect to curriculum, materials, instruction, and rigor. EPCC textbooks and syllabi are to be used. Because high school teachers meet with students for more contact hours per week than a college course often requires, the extra time afforded to the high school schedule can be used by the high school instructor to ensure that all TEKS (Texas Essential Knowledge and Skills) are covered in addition to satisfying the college course syllabi (*El Paso Community College Procedure*, 26 January, 2007).

It is in this policy that conditions are documented for the approval of teachers at the early college high school to teach Dual Credit courses, based on minimal requirements of the Southern Association of Colleges and Schools. Once credentialed, Dual Credit instructors are oriented, supervised, and evaluated by an EPCC Dean or faculty coordinator. Like regular EPCC faculty, Dual Credit instructors are also evaluated by their students (*El Paso Community College Procedure*, 26 January, 2007).

The policy also specifies that developmental courses cannot be offered to high school students under Dual Credit. Students must take placement tests in math, reading, and writing and must meet program-specific requirements, such as pre-requisites. Performance on placement tests and pre-requisites determine what courses students can enroll and when they can take those courses (*El Paso Community College Procedure*, 26 January, 2007). Although it is stated in the policy that high school students shall not be enrolled in more than two college-level courses per semester, this is not true of at early college high schools, which are exempt (personal communication, EPCC Vice President, 12 January, 2010).

COLLEGE READINESS MEASURES

When TMECHS opened in August of 2008, students were limited to the ACCUPLACER test as a college readiness measure (personal communication, Nancy Evans, 17 November, 2009). The College Board describes ACCUPLACER as a suite of tests that quickly, accurately, and efficiently assess reading, writing, math, and computer skills. ACCUPLACER is a computer-adaptive placement testing program delivered over the Internet. Institutions are thus able to administer assessments to many students simultaneously. Tests are scored immediately and individual score reports available immediately after testing that contain test scores and information about course placement based on institutional placement scores. ACCUPLACER includes tests for Reading Comprehension, sentence skills, arithmetic, elementary Algebra, and college-level Mathematics. The suite of tests also includes WritePlacer and WritePlacer ESL to diagnose writing ability. Alternative testing format are also available, for those who need to take the tests on paper and pencil. (ACCUPLACER, 2010)

Based on ACCUPLACER cut scores, when students score high enough on a test to enroll in an entry level college course, they are considered to have cleared the Texas Success Initiative (TSI). Certain ACCUPLACER scores also determine placement into developmental courses, designed to bring students skills up to college ready standards. Clearing TSI then can be achieved by passing one or a series of developmental classes. Per Dual Credit requirements, however, high school students cannot take developmental classes. Following are just the scores that clear students of TSI and place them into college courses:

- Reading Comprehension Test – to be eligible to enroll in college credit reading intensive courses
 - 78 - 120
- WritePlacer – to place into English 1301
 - 5 (out of 8) on the essay and an 80 on sentence skills (students only take sentence skills if they score a 5 on the essay)
 - 6, 7, or 8 on the essay
- College Level Math – to place into Math 1319, 1320, or 1508
 - 51 – 80
- College Level Math – to place into Math 2301 or 1411
 - 81 – 120

(Titles for EPCC/UTEP Courses Shown in Placement Tables, 29 September, 2009)

As of September 25, 2009, additional tests and associated scores were added for placement into college-level EPCC courses and as meeting the Texas Success Initiative (TSI) pursuant to the Texas Higher Education Coordinating Board (Texas Administrative Code Title 19 Part 1 Chapter 4 Subchapter C rules 4.54, 4.57, and 4.85). In the letter dated September 25, 2009, Richard Rhodes and Dennis Brown, President and Vice President of EPCC respectively, documented the recognition of the following additional tests and scores by EPCC:

- TAKS*

- 10th Grade - minimum scale score of 2200 on Math and/or 2200 on English Language Arts with a score of at least 3 on writing subsection
- 11th Grade exit – minimum scale score of 2200 on Math and/or English Language Arts with a minimum writing score of 3
- For Career and Technical Courses – minimum high school passing standard on Math and/or English Language Arts (2100)
- ACT** - Composite of 23 with a minimum of 19 on English and/or math tests
- SAT** - Combined verbal and math score of 1070 with a minimum of 500 on verbal and/or math tests
- PSAT** - Combined score of 107 with a minimum of 50 on critical reading and/or math
- PLAN** - Composite score of 23 with 19 or higher on math and English

* valid for 3 years from date of testing

** valid for 5 years from date of testing

Students with minimum scores on the above tests would be eligible to enroll in the applicable entry-level college course. For writing, the scores would place a student into English 1301. For math, the scores would place a student into Math 1314, 1324, 1332, or 1333; which course a student should enroll in depends on the chosen major. For reading, the scores allow a student to enroll in any other entry level college course. When a student's scores are lower than the above noted minimums, that student must take ACCUPLACER for placement (Letter, Dr. Richard Rhodes and Dr. Dennis Brown, 25 September, 2009).

During its first year of operation (2008-2009), TMECHS students who had met college readiness standards in reading could begin college coursework during the second semester of their freshmen year by taking EDUC 1300 and BCIS. By the second year of operation, policy had been rethought to accelerate students who were eligible to take college courses during the first semester of their freshmen year. Additional courses were also offered. Some of the current freshmen have been enrolled in Dual Credit Biology in addition to EDUC 1300 and BCIS during their freshmen year (personal communication, TMECHS Principal, 9 November, 2009).

Because of the fact that early college high school students can take college courses prior to when most high school students do (during their junior and senior years), the additions in placement instruments accepted do not impact the students to a great degree. Even if a 10th grade TAKS test or a PSAT test exempts a student, the student cannot benefit until his or her junior year at TMECHS (personal communication, TMECHS Principal, 9 November, 2009).

ACCUPLACER

Some students enrolled at TMECHS achieve college readiness based on ACCUPLACER test scores before others of their peers. As of March 2010, just sixteen TMECHS sophomores have still not cleared TSI with regard to writing, still based only on ACCUPLACER scores because spring 2010 TAKS test scores for ELA have not been released. All sophomores satisfied TSI with regard to reading by the end of their freshmen year. As of March 2010, 25 freshmen have yet to satisfy the reading requirement and 36 freshmen have not cleared TSI with regard to writing. Although to date, only one sophomore has scored high enough on the Math ACCUPLACER test to

take an entry level college math course, math placement has not been an issue yet because as high school students, TMECHS students must satisfy high school curriculum requirements before taking any college level math classes (personal communication, TMECHS Principal, 9 November, 2009).

Because students can have the option to take college-level classes during their freshmen year at TMECHS, ACCUPLACER preparation is embedded in a two-week summer bridge program for incoming freshmen. In addition to orientation to the campus and team-building exercises, students attend workshops to help them understand the format and expectations of the ACCUPLACER tests. During the first summer bridge program, students took the full battery of ACCUPLACER tests (reading, writing, and math) before the summer bridge program and then again at the end of the bridge program. During the second summer bridge program, students did not take a pre-test before the two-week bridge program sessions, but did take the full battery of tests once it was over. Currently, faculty and staff are planning this coming summer 2010's summer bridge program and one of decisions to be made is whether to pre-test or not (personal communication, TMECHS Principal, 9 November, 2009).

ACCUPLACER preparation workshops are organized by content area and student ability. For students who have not passed a portion of ACCUPLACER, workshops and retakes are scheduled throughout the school to give these students the opportunity to pass. Teachers plan and lead the workshops (personal communication, Terri Jordan, 4 February, 2010).

STUDENT RECRUITMENT AND ENROLLMENT

The application for admission for TMECHS includes Part I School Overview, Part II Applicant Information, Part III Current School Information, Part IV Student Responses, Part V Parent Responses, and Part VI Applicant Criteria, Important Information and Selection Process (*Transmountain Early College High School Application for Admission*). The application can be completed on paper and submitted to a middle school counselor or submitted online. Information about the school is presented at recruitment fairs and applications are available at EPISD middle schools and at TMECHS. TMECHS participates in recruitment functions along with other EPISD magnet schools (personal communication, TMECHS Principal, 9 November, 2009). While TMECHS does not have strict admissions requirements such as a high GPA or teacher recommendations or interviews prior to selection like some magnet schools, it still fits the criteria of a magnet school as defined by the U.S. Department of Education, a public elementary school, public secondary school, public elementary education center, or public secondary education center that offers a special curriculum capable of attracting substantial numbers of students of different racial backgrounds (Elementary & Secondary Education, Part C – Magnet Schools Assistance).

Part I Overview explains that the school is a unique and designed to provide students with “a rigorous course of study” focused on a T-STEM model. Advanced coursework is offered in a manner that enables students to earn an Associates Degree as well as a high school diploma. The small school setting, housed on an EPCC campus, is highlighted as crucial to the redefinition of the typical comprehensive high

school that is TMECHS (*Transmountain Early College High School Application for Admission*).

Part II Applicant Information requires potential students to provide information such as date of birth, gender, contact information, and t-shirt size. Required fields also address whether the student has ever been enrolled in an AVID (Advancement Via Individual Determination) class in middle school and if anyone in his or her immediate family has ever received a college degree (*Transmountain Early College High School Application for Admission*).

Part III Current School Information not only asks the potential to identify his or her middle school, but also requires the name of the student's counselor at that middle school (*Transmountain Early College High School Application for Admission*).

In Part IV, Student Responses are to be handwritten, unless the student is submitting the application online. Enough space for ten handwritten lines is left to answer each of three questions. The first question instructs the student to explain why he or she wants to attend TMECHS as if he or she was talking to one of his or her friends. Question two asks the student to explain why he or she feels prepared to handle an educational experience that requires coursework that is a combination of both high school and college courses in a college setting (*Transmountain Early College High School Application for Admission*).

Part V requires parents to respond to three questions. As in the student response section, the question formats also allow for 11 handwritten lines. The first question asks what support mechanisms the parents feel their children would need to be successful in

an early college high school setting. The second question asks what the parents believe are their children's greatest strengths. The last question asks what parents expect from their children's experience in the school (*Transmountain Early College High School Application for Admission*).

Part VI of the Transmountain Early College High School Application for Admission is titled Applicant Criteria, Important Information and Selection Process. The submission deadline for students who would be entering ninth grade in the fall of 2010 was January 8, 2010. The criteria for selecting students for admission into TMECHS are as follows:

- The applicant must reside in the El Paso Independent School District.
- The applicant must meet the requirements for promotion from eighth grade to ninth grade (including 90% attendance, grades 70% overall GPA in core subjects, master on the **first** test administration of the Spring 2010 TAKS Math/Reading tests).
- The applicant must have completed all portions of the application for admission.
- The applicant and parent/guardian must go through an interview process with the administration of the Transmountain Early College High School.
- The applicant must attend a two-week Summer Bridge Program in June of 2010.
- The applicant must have submitted the application for admission to his/her middle school counselor or TMECHS principal by the deadline of January 8, 2010. (Applications received after the deadline will be accepted, but will be place

on a waiting list). If the application is submitted electronically, the typed name of the student and/or parent will be considered the equivalent of a signature.

(Transmountain Early College High School Application for Admission)

Part VI sets out the process for selecting students for admission:

- A random lottery process, conducted by the District's Internal Audit Department, will be used to select the students for admission if more than 125 qualified students apply.
- A total of 125 students will be admitted. *Transmountain Early College High School Application for Admission*

Three disclaimers are also listed in this section of the application:

- While attending the Transmountain Early College High School, if the student experiences issues with attendance, tardies, discipline, low grades due to lack of effort, or lack of parent/guardian cooperation, the administration reserves the right to recommend that the student be dropped from the Transmountain Early College High School and returned to his/her home campus.
- The applicant and guardian must be aware that the Transmountain Early College High School does not have lockers; therefore, the applicant is required to carry his/her books/supplies, etc.
- Roundtrip transportation is only provided from the applicant's home campus. The applicant is responsible for getting to/from his/her home school.

(Transmountain Early College High School Application for Admission)

A copy of the application for admission is attached as Appendix J.

TMECHS STUDENT POPULATION

Demographic information on the school's web site as of March 12, 2009, is based on 115 9th graders and 102 10th graders, for a total enrollment of 217. In the categories of race and ethnicity, following are numbers and their associated percentages by 9th grade, 10th grade, and total campus enrollment:

Table 2 TMECHS Student Demographic Information #1

	All	African American	Hispanic	White	Asian	American Indian
9th	115 (53%)	13 (5.99%)	80 (36.87%)	18 (8.29%)	1 (.46%)	2 (.92%)
10th	102 (47%)	5 (2.3%)	80 (36.87%)	17 (7.83%)	1 (.46%)	0 (0%)
Campus	217 (100%)	18 (8.29%)	160 (73.73%)	35 (16.13%)	2 (.92%)	2 (.92%)

(Transmountain Early College High School)

Other demographic information on the TMECHS student population includes percentages of students that are Economically Disadvantaged, Special Education, Limited English Proficiency, and Gifted and Talented.

Table 3 TMECHS Student Demographic Information #2

	All	Economically Disadvantaged	Special Education	Limited English Proficiency	Gifted and Talented
9 th	115 (53%)	76 (35.02%)	2 (.92%)	3 (1.38%)	31 (14.29%)
10 th	102 (47%)	56 (25.81%)	1 (.46%)	1 (.46%)	25 (11.52%)
Campus	217 (53%)	132 (60.83%)	3 (1.38%)	4 (1.84%)	56 (25.81%)

(Transmountain Early College High School)

STUDENT RECRUITMENT AND ATTRITION RATES

For each of the school years that TMECHS has been open, 125 students were enrolled for the August start as a freshmen cohort. The school's web site explains that "A lottery process has been and will continue to be used to identify the 125 students for admission each year" *(Transmountain Early College High School)*. The site also boasts that the school's students are "representative of all geographic areas of the city" *(Transmountain Early College High School)*.

As of March 8, 2010, mid-spring of the schools second year in operation, there were 101 sophomores and 113 freshmen. Most of these students left of their own

volition; some left because their families moved away from El Paso; others still had to leave for disciplinary reasons or because it was determined that they were better suited to a different school set-up (personal communication, TMECHS Principal, 9 November, 2009).

SCHOOL SITE EMPLOYEES

Currently, with two grade levels, freshmen and sophomores, the school itself employs 24 full-time staff and faculty. There are a Principal and her secretary, an Assistant Principal for Guidance and Instruction, an Attendance/Bookroom Clerk, a Counselor, a Counselor, a Parent Engagement Leader, an Assistant Head Custodian, and two part-time custodians. There are sixteen faculty members, each highly qualified in their discipline area, and the majority of whom (75%) can teach dual credit, having a masters degree in their discipline area in addition Texas Teacher Certification:

- 2 Social Studies teachers
- 2 Spanish teachers
- 2 Science teachers
- 2 Mathematics teachers
- 2 English teachers
- 1 Guitar/Combo teacher
- 2 AVID/Education 1301/Journalism teachers
- 1 Physical Education teacher
- 1 Physical Education/Health Combination teacher
- 1 Business Education Teacher

According to the most recent campus profile, of the sixteen teachers, 7 are male and 9 are female. Three of teachers are African American; 8 are Hispanic; 4 are White; and 1 is Asian. Of the eight administrative and support staff, 1 is African American, 4 are Hispanic, and 3 are White. (*Transmountain Early College High School*)

HIGHLY QUALIFIED TEACHERS

All TMECHS teachers meet Texas state qualifications to be highly qualified and if teaching dual credit courses are credentialed with EPCC. To be considered highly qualified by the State of Texas, per Title I, Part A, Section 1119, as of the end of the 2005-2006 school year, all teachers in core academic subject areas or whose salaries are paid in full or in part by Title 1, Part A funds, must have full state certification, a bachelor's degree, demonstrated competency, which means passing the applicable ExCET/TEXES content exam for a certification area appropriate to the teaching assignment. Competency is demonstrated by meeting three criteria, at least one creditable year of teaching experience, a minimum of 24 points derived from experience teaching at the elementary level (1 year = 1 point); college coursework in English/ Language Arts, Math, Science, and/or Social Studies (1 college hour = 1 point), and/or professional development that meets the standards for Continuing Professional Education (CPE) credit established by SBEC rules (15 CPE clock hours = 1 point). Professional development includes institutes, workshops, seminars, conferences, in-service or staff development; interactive distance learning, video conferencing, or on-line activities or conferences, and independent study (20% max), including authoring a published work; development of curriculum or CPE training materials; teaching or presenting a CPE activity, (10% max); serving as a mentor educator, (30% max); and

serving as an assessor under TAC §241.35 relating to the Principal Certificate (10% max). (*Texas Education Agency*, 2010).

PROFESSIONAL DEVELOPMENT

There are a variety of professional development requirements and opportunities for faculty and staff at TMECHS. In addition to district trainings, community college trainings, and grant funding partner trainings, teachers and support staff are required to participate in professional learning communities (PLCs), faculty meetings, and other committee meetings as scheduled.

COURSEWORK AND SUPPORT STRUCTURES

High School Curriculum - Distinguished Achievement Plan

All TMECHS students are on the Distinguished Achievement Plan for high school graduation credit. Beginning with the incoming freshman class of 2007-08, EPISD high school students that pursue the Recommended High School Program or the Distinguished Achievement Program must earn 26 course credits to graduate, including four credits each in math, science, social studies and English language arts. Students must pass their classes as well as all four sections of the exit level Texas Assessment of Knowledge and Skills (TAKS) in order to receive a diploma and graduate from a Texas public high school (TEA web site). Students first take the exit-level TAKS in the spring of their junior year. The exit level TAKS includes math, science, social studies and English language arts. These tests are based on the Texas Essential Knowledge and Skills, or TEKS, which are the curriculum standards (or broad curriculum requirements) that teachers use every day in the classroom as the basis for instruction.

Students have five opportunities prior to their graduation to take and pass the four exit level TAKS tests; however passing these tests in their junior year is preferable. (*Texas Education Agency, 2010*).

Course Sequences Established

Pursuant to the interlocal agreement between EPISD and EPCC Committees comprised of faculty and administrators from EPISD and EPCC created course sequences to merge the Distinguished Achievement Plan for a high school diploma with the requirements of an associate's degree prior to the school's opening. Dual credit offerings already established were reviewed for applicability and a framework for an alignment of courses was designed on a year-to-year basis so that students could complete the 26 required high school credits as well as the 60 transferable college credits within four years. Courses in the sciences, Fine Arts, and Mathematics were noted in general terms since depending on the associate degree pursued, the specific required courses would be different. All students would be required to complete a 6 college credit Research Project based on its application to the Distinguished Achievement Plan and its positive impact on the development of student abilities for additional higher education coursework. A copy of the model Distinguished Achievement ECHS Program @ TM and Associate Degree grid is attached as Appendix I.

Individualized Degree Plans

Each TMECHS student has his or her own individualized degree plan. Students can choose from a variety of Associate of Science and Associate of Arts degree plans, to be conferred by EPCC. Associate of Science degree plans include Architecture,

Biology, Biological Sciences-Pre Dentistry, Biological Sciences-Pre Medicine, Biological Sciences-Pre Pharmacy, Biological Sciences-Pre Veterinary, Chemistry, General Studies, Geological Sciences, Mathematics, and Physics. Associate of Arts degree plans include Computer Science, Civil Engineering, Computer Engineering, Electrical-Electronic Engineering, Industrial/Mechanical/Metallurgical/Materials Engineering, and Teacher Preparation (*Transmountain Early College High School*)

Dual Credit

Prior to the school's opening in August 2008, there were discussions about whether to offer students AP classes in addition to Dual Credit and the decision was made to offer Pre-AP classes, but to then focus on Dual Credit classes and not AP because the goal for all students was an associate's degree and a diploma in four years. The ECHS design relies substantially on the use of dual credit, facilitated by a partnership between public institutions of higher education and secondary schools that allows students to receive college and high school credit for courses taken while in high school. In a traditional Texas high school, students are limited to a maximum of two courses per semester which can be taken only when they are juniors or seniors. However, the Texas Higher Education Coordinating Board (THECB) exempts ECHS programs from the dual credit restrictions placed on traditional high schools (THECB, 2009). This unique exemption contributes to the central component of dual credit access in the ECHS vision of enabling students to earn up to 60 hours of college credit (THECB, 2009). The exemption allows ECHS students to enroll in more than two dual credit classes per semester in any level of classification (freshman, sophomore, junior,

or senior level) and the dual credit courses are guaranteed to transfer to every Texas public college and university as part of the core curriculum (TEA, 2007).

Dual credit courses are currently offered solely at the TMECHS high school campus and are taught by TMECHS teachers. Students have taken concurrent enrollment college classes, such as in the summer. At the discretion of the principal, high school credit has been given for a college class if it is also offered in the dual credit format (personal communication, TMECHS Principal, 9 November, 2009).

Grading Policies and College Course Syllabi

The grading policy for high school courses incorporates clearly defined grading procedures consistent with District policy. Teachers are required to distribute copies of their grading procedures to students and parents at the beginning of the year and to review same intermittently during the school year so that students and parents understand what is expected of them. EPISD policy requires that teachers record a minimum of 2 grades per week or 12 grades per six-week grading period for each student. Teachers are given the option of using either a weighted percentage or a total points system for calculating grades. Six-week grades are based on a numerical scale of 0 – 100:

A = 90 – 100

B = 80 – 89

C = 75 – 79

D = 70 – 74

F = 69 - Below

In dual credit classes, teachers must also distribute syllabi to students that outline grading criteria. In freshmen level classes, students must be apprised of their progress at midterm (personal communication, TMECHS Principal, 9 November, 2009).

Parent Teacher Conferences

Per district policy, parent/teacher conferences are scheduled once per semester. In addition, teachers are encouraged to contact parents whenever a student is experiencing difficulty academically, is in danger of failing, or is exhibiting behavior issues. Appointments with teachers or administrators can be made through the main office or directly with a teacher or administrator. Parents are not allowed to interrupt teachers during instructional time. Administrators are available to assist in parent/teacher conferences and teachers can schedule block conferences with regard to a particular student. A block conference is warranted if a student is experiencing difficulty in more than one class. In a case such as that more than one teacher will meet with a student and his or her parent for a group discussion (personal communication, TMECHS Principal, 9 November, 2009).

The off-campus alternative program (Raymond Telles Academy – RTA) is where students are assigned by campus administration if they exhibit serious behaviors and/or repeated disciplinary issues. In the case of TMECHS, if a student is assigned to RTA, they are dropped and returned to their home campus when exited from RTA. If a student is sent to RTA, they do not come back to TMECHS (personal communication, TMECHS Principal, 9 November, 2009).

Course Completion Rates

In the spring semester 2009, some of the students in the first cohort of freshmen took courses for college credit. The options were Business Communication and Information Studies (BCIS) and Education 1300. Whether or not a student could take these college courses depended upon whether he or she had passed the Reading ACCUPLACER college readiness test. Of 114 students who took BCIS for both high school and college credit, 106 passed. Of the same 114 students who took Education 1300 for dual credit, 110 passed. Education 1300 satisfied a 3 credit core class requirement for all associates degree plans while satisfying a ½ credit elective in the distinguished achievement high school plan (personal communication, TMECHS Principal, 9 November, 2009).

In the fall 2008 semester of the school's first year in operation, 97 out of 115 students passed all 8 of their classes, 8 students passed 7 of their classes, 5 students passed 6 of their classes, 1 student only passed 4 of his or her classes, 3 students only passed 3 of their classes, and only 1 student just passed 1 class (personal communication, TMECHS Principal, 9 November, 2009).

In the spring 2009 semester, 94 of 115 students passed all 8 classes, 9 students passed 7 of their 8 classes, 3 students passed 6 of their classes, 3 students passed just 5 of their classes, 3 students passed 4 of their classes, 1 student passed just 2 classes, and 2 students only passed 1 class (personal communication, TMECHS Principal, 9 November, 2009).

In summer 2009, all students who took college courses passed them. 10 students took a college Biology course. Two students took a US History to 1865 college course. Three students took American Government and Politics. 1 student took each of the following courses: Art Appreciation, Modern Dance, Physical Geology, and Ballet Folklórico (personal communication, TMECHS Principal, 9 November, 2009).

AVID

When committees were planning curriculum and course sequences for TMECHS, they decided that an AVID elective would be incorporated into student schedules for all four years. After the school's first year, however, it was decided that students could opt for a different elective if their grades in all classes were exemplary and based on the recommendation of the AVID teacher/coordinator. Some of the sophomores are no longer taking AVID (personal communication, TMECHS Principal, 9 November, 2010).

Tutoring

Teachers schedule themselves before and after school and during lunch hours to help students to master material they are having difficulty with or complete assignments. Grants such as MSEIP and EPCC also fund the hiring of tutors to assist students academically. These tutors have been scheduled before and after school as well as during the school day. During the spring 2009 semester, students were pulled out of elective classes for one-on-one tutoring to help them prepare for the Mathematics TAKS (personal communication, TMECHS Principal, 9 November, 2009).

Tutoring is also available on the EPCC campus and TMECHS are entitled to those services. The Tutoring Lab is inside the EPCC library and is open Monday

through Saturday. EPCC also has a Writing Center and computer labs, with academic programs on them (personal communication, Steve Smith, 7 December, 2009).

TMECHS FIRST YEAR ACCOMPLISHMENTS

Extracurricular Activities

Although the focus is primarily on academics, TMECHS provides extracurricular activities for student enrichment. TMECHS has several extracurricular clubs and organizations; some began during the first year of operation, and others were added during the 2009-2010 school year. School organizations include an Ecology Club, a Robotics club, Student Government, Yearbook Club, UIL, Mock Trial, Academic Decathlon, National Honor Society, Community Service Club, Talent Show Crew, and Business Professionals of America. (*Transmountain Early College High School*).

TMECHS students have already produced exemplary results in statewide competitions in the T-STEM areas. Two of the current sophomores placed at the 3rd Annual T-STEM Best Practices Conference at Texas Tech University in February 2010. The two students had begun their research during the summer of 2009 during TMECHS' first summer research institute. The schools' biology teacher collaborated with EPCC faculty in the planning and facilitation of a month-long summer program in which several students planned and completed research projects. Once the summer research institute was done, several of the groups entered their projects in a competition at UTEP in the fall of 2009, at an annual meeting of the Rio Grande Branch of the American Society for Microbiology. Poster projects entered were "Isolation and Identification of Bacteria on Plastic Surfaces in Playground Areas", Isolation and Identification of Bacteria on Metal Surfaces", and "Digital Audio Format vs. Audio

Quality". There were 50 student poster presentations at the meeting, representing students from UTEP, NMSU, Texas A&M, Sul Ross, New Mexico Tech, and EPCC. (*Transmountain Early College High School*).

Three groups of students who competed in the Rio Grande Branch of the American Society for Microbiology at UTEP placed high enough to move on to the 3rd Annual T-STEM Best Practices Conference and one of the projects placed at that conference. The research project that received top five honors out of 25 projects and then ultimately second place in the Power Point competition of the top five focused on isolation of bacteria in playgrounds (*Transmountain Early College High School*).

State Rating – Exemplary Status 2008-2009

Public schools in Texas are rated on an annual basis by the TEA and receive one of the four rankings: exemplary, recognized, academically acceptable, or academically unacceptable. Campus accountability ratings are based on results of the state's proficiency assessment, the Texas Assessment of Knowledge and Skills (TAKS). There are two main criteria which qualify schools for an exemplary rating. One criterion involves at least 90% of students passing each TAKS subject test given at a school of Reading, Writing, Social Studies, Mathematics, and Science (*Texas Education Agency, 2008*).

During its first year of operation, the TMECHS campus received TAKS Gold Performance Acknowledgements for Commended performance in both of the areas that the freshmen took the TAKS test, Mathematics and Reading/ELA. Teachers, students, and tutors worked hard to achieve these honor, and the campus was designated an

Exemplary Campus in 2009 (*Transmountain Early College High School*). In Mathematics 89% of the students met standard with an average scale score of 2308 out of 2400 and 37% achieving commended performance. In the State's projection standard, because of how close many students came to achieving the 2100 scale score, the projection standard for the freshmen was 98%. In Reading, 97% of the freshmen met standard with an average scale score of 2319. The projection standard for this group was 100% (personal communication, TMECHS Principal, 15 February, 2009). Individually, in order to meet standard, a student must achieve a scale score of 2100 on a TAKS test. To meet the college ready standard, a student must score 2200, and to meet the commended standard, a student must score 2400. (*Texas Education Agency*, 2008).

CHAPTER FIVE

ANALYSIS AND INTERPRETATION OF THE RESEARCH RESULTS

INTRODUCTION

"It is an amazing experiment...this incredible set of activities...it is enormously important" (personal communication, UTEP Provost, 23 November, 2009).

While it is true that TMECHS is driven by an incredible set of activities, the focus of this analysis was the actions and interactions that turn individual activities into mission, particularly with regard to the planning, development, and facilitation of policies and processes by partners and administrators. This researcher understood that interviewing administrators would leave out the perspectives of students and faculty, but also suspected that data and analysis would lead to recommendations for further studies that incorporate students and faculty; and this has been the case. Because a partnership for a T-STEM early college high school requires the participation of a considerable number of administrators at several levels within institutional hierarchies, this researcher decided to limit this study to the perspectives of organizers and process developers. By conducting separate studies later, the perspectives of teachers, staff, and students on efficacy and the impact of positive collaboration and interaction can be then compared to the outcomes of this research. In sum, this study was designed to provide insight into how policies and processes were designed, implemented, and monitored based on static and official requirements and guidelines, so targeting administrators that were given the charge to translate larger policy into process became the study design. A qualification to this discussion is necessary; while this researcher, a

teacher at TMECHS, was diligent not to allow bias to affect analyses, she has applied factual knowledge as only a participant researcher could.

Potential interviewees were chosen because they represented several, if not all, administrative levels in the hierarchies that participated in TMECHS planning and school design. The following are the position titles that were decided upon as being instrumental in interpretive acts regarding policy intent, process formulation, and process implementation.

- The President of EPCC
- The Vice President of Instruction, EPCC
- The Provost of UTEP
- The Associate Provost, UTEP
- Project Directors from the Texas High Schools Project
- The Director of Early College High Schools, EPCC
- The Associate Superintendent for Secondary Schools at EPISD
- The Director of College Readiness & Magnet Programs, EPISD
- The Instructional Dean for Math, Occupational Education, and Science, EPCC Transmountain
- The Instructional Dean for Arts, Communication, and Social Sciences, EPCC Transmountain
- A T-STEM Consultant from the Texas High School Project
- The EPCC-TMECHS Liaison
- TMECHS Principal

The anticipation that several actors would influence the formulation and implementation of policy and processes arose from the idea that the development and maintenance of a T-STEM early college high school would have to be interactive and collaborative simply because of the number of stakeholders. A variety of professionals within a public school system, a community college, and grant funding agencies have

input into the design and facilitation of policies and processes to satisfy goals and requirements.

The first theme that emerged from documentation review and interview analysis was the school's culture; a pervasive culture of collaboration and support that extends outward to encompass the partnership between EPISD and EPCC and its efforts with grant funding facilitators and UTEP. Several participant discussions either referenced or supported the intentional and unintentional development and maintenance of a solid institutional culture, dependent on a family of professionals whose actions and interactions, along with those of students and their families, were crucial factors in the school's early successes, as well as in the school's ability to meet challenges head on. This is not to say that every process designed by collaborative effort works flawlessly, but the solid nature of the partnership among representatives of distinctly different institutions was pervasive enough throughout the interviews to warrant becoming a theme.

And although an understanding that a school's culture is important to its successes should come as no surprise, analyzing the development and maintenance of that culture and its influential partnerships using co-construction theory enabled an investigation into how interaction affected policy formulation and its implementation with regard to the many facets of academics. Reciprocal interaction, communication, negotiation, and influence, moved down levels of administration, from grant funding facilitators to administrators to teachers to the students and their families and back up again while also incorporating lateral movement based on the sharing of information among partners, faculty, staff, students, and families. As co-construction theory

instructs, influences were revealed to move "in multiple directions among active participants in all domains of the system and over time" (Datnow, 2006, p. 107). Mutual decision-making processes and reflection influenced how processes were developed and how they unfolded in practice. Evidence was found of consideration of processes and outcomes in order to address difficulties, measure successes, and ultimately decide if processes might be changed, enhanced, or even accelerated. Conversely, external requirements and decisions negotiated by administrators, as well as their impact on individuals, processes, and the school as a whole prompted recommendations for not just consideration of already established policy with the benefit of hindsight, but for substantial revision to those policies and their associated processes.

The realities of the TMECHS campus environment and the nature of the relationships of its partnerships resulted from a blending of activities within the context of their social settings. While interviewees were administrators only, data revealed that the school's multifaceted and complex culture has been and continues to be developed, fostered, and supported by how staff and faculty are chosen and how they work together. And while some administrators positively discussed how all supportive policies were instrumental in the development of a solid institutional culture, this researcher as a participant in the school's mission adds her own insight into the lack of efficacy of certain processes, such as professional development requirements by grant funding agencies and dual credit support by EPISD and EPCC. Utilizing data from several participants, including researcher knowledge, enabled the setting of activities in context, which enhanced an understanding of how they combined to serve the school's vision and mission, which proved to be replete with challenging expectations. Therefore,

the manners in which partners, staff, and faculty communicate as they envision and formulate policy and then implement it revealed not only the relationships among individuals but “reciprocal relations among the social contexts in the policy chain” as well (Datnow, 2006, p. 107).

Promising is that the school’s culture will continue to evolve since TMECHS opened less than two years ago at the writing of this dissertation. The school’s future ultimate and individual successes will be dependent on how its professionals, along with parents, family members, and students participate in the implementation of processes and in the development or revision of new ones. The concept of mutual adaptation, which supports co-construction as inherent in the development of policy and processes applied to explanations of how interrelationships between professionals within the school, as well as across a social and political arena, have shaped implementation (Datnow, 2006, p. 107).

While each of the categories in the interview grid (Student Recruitment and Enrollment, Academic Design, Family Engagement, College Readiness, Coursework and Support Structures) related to the development of a supportive, family-oriented school, analyses of interview transcripts showed that data collected from each of the categories applied to three additional themes, the Merging of T-STEM with ECHSI, TMECHS as a Model for Other Schools, and TMECHS as a Vital Component in a P-20 Education System. These themes reveal the aspects of policy and process development that were perceived as challenges early on in the school’s history as well as how those challenges were negotiated. Successes and shortcomings are also revealed which prompted this researcher to make recommendations. Both positive and

negative implications of policy and process have supported the development and maintenance of the school's culture.

Administrator comments about the school's culture were positive. One participant explained TMECHS culture as being due to "high expectations built on meeting challenges head on...planned, fostered, and implemented" by all partners in the school's operation (personal interview, UTEP Provost, 23 November, 2009). Professionals outside the local partnership, for example those from the Texas High School Project, described the collaborative nature of El Paso's early college high schools as unique compared to that of other early college high school programs across the state and country because of how well partners work together. In analysis, interaction between educators, students, and families, and the social, organizational, and political life of the school is revealed to be dynamic and active (Datnow, 2006, p. 107). Partners, staff, faculty, students, and family members have shown professionalism and dedication, and continue to move forward in the development of their school.

Following are brief characterizations of the four themes. Each theme is then explained, contextualized, and evidenced individually as the collaborative efforts of partners, faculty, and staff have shaped the development of the school.

Theme 1: School Culture: TMECHS has a strong foundation built on communication and collaboration among partners, staff, faculty, students, and parents, who interact in collaborative efforts that extend outward to encompass the partnerships among EPISD, EPCC, grant funding facilitators, and UTEP.

Theme 2: The Merging of ECHSI with T-STEM: The rigor and complexity of academic and extracurricular programs and processes required to satisfy the merging of the early college high school model with T-STEM requirements has been challenging for TMECHS partners, faculty and staff. Processes and programs to fulfill external policy were designed based on the discussions, negotiations, and agreements of administrators whose collaborative efforts attempted to anticipate difficulties. Processes were described by administrators as having satisfied guidelines and to have been carried out pursuant to directives. Processes and programs can thus be described as successful. However, evidence coupled with the principal investigator's knowledge as a TMECHS employee shows that while programs were comprehensively designed, desired outcomes were not proven.

Theme 3: TMECHS as a model for change: TMECHS was described as already being a model for early college high schools that are starting up across the state and across the country and as providing impetus for change in area high schools in El Paso's border community. Evidence is found in emergent programs and by reference to the testimony of visitors about the school's environment and people.

Theme 4: TMECHS as a component in a P-20 model: TMECHS exemplifies a component in a P-20 education model because of the level of collaboration that is evident among TMECHS, EPISD, EPCC, and UTEP.

Analysis is contextualized by supporting evidence from the five original interview categories and related data from policy documentation. Data streams routinely support more than one theme; decisions were made with regard to placement. Analysis is often

positive and complementary based on the perspectives of and evidence provided by administrators. Still, recommendations are proposed with regard to the enhancement or revision of external policy and internally conceptualized processes, as well as for future research. These discussions are in the conclusion.

Providing insight into how the four themes emerged, data analysis showed how the early college high schools in El Paso originated and how that origination can be synthesized with the realities of development and implementation. El Paso's early college high schools began and continue to be supported by EPCC's President, who is a model for the collaborative nature of the partners, faculty and staff at TMECHS. Still, providing a model and support would not be enough without dedication to the mission by partners and then application of sound decision making and process development and facilitation. While the early college high schools in El Paso, TMECHS included, could not have been realized without the vision, insight, enthusiasm, and guidance of EPCC's president, each school has required comprehensive planning and process conceptualization and consistent oversight, program development, and process implementation.

Several interviewees discussed how the insight and vision of EPCC's President manifests itself in leadership and participation in the community. His focus on effective partnerships, his ability to listen to others, and his understanding that cost should not be the deciding factor in decision-making processes were described as instrumental in the early development of early college high schools in El Paso. Because context shapes political dynamics (Malen, 2006 in Honig, 2006, p. 84), analysis of this interview data

helps to explain how the TMECHS partnership has been influenced by the leadership style, expectations, and model of EPCC's president.

When he came to El Paso, EPCC's president guided the expansion of dual credit and the creation of early college high schools because of a belief that opportunities, incentives, and motivation can and should be provided to students while they are still in middle and high school, so that they stay interested in education (personal communication, EPCC President, 7 December, 2009). ECHSI, T-STEM, and P-20 initiatives are based on this goal that higher education institutions and public schools have an obligation to work together so that children who have a desire to work hard, but may not have excelled because of their circumstances are given appropriately designed opportunities to complete rigorous high school educations and continue on to earn college degrees.

The goal of providing educational opportunity for students in El Paso's border community is extremely important because the majority of those students are representative of the underserved and underrepresented. Many educators subscribe to the idea that demographic information can be changed if well-planned and well-executed programs are put in place. EPCC's president discussed El Paso's demographics, "of all people 25 years of age and older, 55 percent have just a high school diploma or less and a third of our total population don't even have a high school diploma" (personal communication, EPCC President, 7 December, 2009). In 2001, there were only 80 students taking dual credit in El Paso County when EPCC's new president guided the development of programs to enhance motivation and incentives for teenagers in El Paso. In 2009, 3500 students took dual credit; this increase in numbers

supports the idea that El Paso's students have the abilities and will work hard if challenged appropriately with incentives such as the opportunity of getting college credits cost-free.

Several discussions illuminated the importance of demographic change as a goal of early college high schools, and T-STEM and P-20 initiatives. For underserved and underrepresented students in El Paso, partners are attempting to facilitate and influence changes in the scope and purposes of high school (Tyack and Cuban, 2005, p. 53), changes so great that they will change demographics. Evidence of systemic influence is found in the theme of TMECHS as a model for other schools. Overall, analysis supports the manifestation of a partnership between a public secondary school and higher education institutions whose professionals work together to create a school that reflects and attempts to address local conditions (Glick, 2006, p. 2).

THEME 1 – SCHOOL CULTURE

Overall Characterization

In this theme, an overall characterization of the school's culture is revealed via statements from several administrators who attested to the collaborative efforts of partners, faculty, and staff, and the creation of an environment where rigor and positive evolution occur on a daily basis. Process design and implementation was described by administrators as effective, both dependent on and influential to the distinctive institutional character of the schools (Tyack and Cuban, 1995, p. 6). Several interviewees referred to partners, faculty, and staff as contributing to not only program execution, but to the creation of a positive school culture. This congeniality may be in part attributable to the newness of TMECHS; partners, faculty, and staff are still

enthusiastic and realize that they are breaking new ground. Or the positive forward momentum and resulting atmosphere may be due to the type of individuals hired. Joyce Ritchey, Instructional Dean for Arts, Communication, and Social Sciences at Transmountain EPCC, said that faculty and staff were all “right together with the same vision and it works because you all make sure that it works” (personal communication, Joyce Ritchey, 19 November, 2009). And UTEP’s Provost commented that if El Paso’s early college high schools could be replicated, new schools would be successful because “the culture of the school is a very powerful force” (personal communication, UTEP Provost, 23 November, 2009).

Planning Process

A strong campus culture that incorporates appropriate rigor and support, as well as a dedication to initiative goals and objectives begins with the planning process and in the case of TMECHS, planning was intense. During a year-long period prior to the school’s opening in August 2008, as many as 40 different professionals were involved in the development of the school’s design at one time. These professionals included EPCC deans, faculty, counselors, and liaisons; EPISD administrators, teachers, and liaisons; and new school staff, a principal and assistant principal. Interviewees described the planning process as mind boggling because of the attention and consideration that had to be applied in the creation and specification of policies for student enrollment, course selection, degree plans, and family engagement.

At TMECHS, policy and processes were developed as Desimone (2003) had proposed they should be for an early college high school: guided by a grand design

already placed on the local partnerships, but utilizing management techniques, organization, and decision making processes to determine their character and the manner in which they would conform to the ECHSI and T-STEM models and their ideals. Participants gave and received advice and were acknowledged for their expertise. The planning process is analyzed in depth in Theme 2 in discussions of how academic processes and programs to satisfy T-STEM and ECHSI goals and objectives were planned for, with considerations made, for example, about how programs and processes would impact students and their families.

Analysis here shows that partners were willing to revisit strategies when an initial 40-member steering committee was pared down to 20-individuals because it was too hard to manage (personal communication, EPCC Dean Steve Smith, 7 December, 2009). Once the steering committee was paired down, members worked, attempting to take the student population into consideration in order to begin the school on solid footing. Advice was sought from experts outside the group, such as in questions to a chemistry instructor with regard to how early in a degree plan dual credit chemistry could be offered.

Selection and Support of Faculty and Staff

While the planning process during the year prior to the school's opening was comprehensive and provided evidence of collaboration of partners, several participants also discussed the manner in which the school's professionals worked together and highlighted the camaraderie of faculty as significantly contributing to the environment once the school had opened. For an early college high school to be strong and

successful there must be unity in the high school staff and unity and support from the college. The school's principal noted that TMECHS was fortunate when she said that she saw "unity built in with the people that have been hired and with the community college staff as well" (personal communication, 9 November, 2009). The principal's testimony supports an idea documented by Tyack and Cuban (1995) that schools themselves impact reforms (p. 60). Previewing discussions in Theme 2, the principal noted that care was taken in the hiring of highly qualified professionals that would be a good fit for the students and for an early college high school environment. Using this knowledge, analysis here extends causal arrows in reciprocal directions. The selection of faculty and staff impacts the development of a school's culture and how that staff then works together continues that influence. New additions to the environment, faculty and students, are influenced by how existing members receive them. New additions then become part of their environment and add their own influence.

Further evaluation highlights how teachers are a critical factor in the school's environment because of their expertise and dedication. The importance of faculty to the foundation and growth of the school based on student and family engagement became evident in several interviews. One participant noted that the teachers see their roles as instructors and advisors, availing themselves to students to answer the questions that perhaps parents would like to but in many cases are not able to. Because El Paso's population has only 21% college graduates with a bachelor's or above (personal communication, Nancy Evans, 17 November, 2009), many parents may not be able answer questions about their children's education, with regard to issues involved in registration or testing, simply because they do not know about these areas. Both

parents and students need to be educated in these areas. At TMECHS, interviews revealed that a majority of the parents are very involved and are learning the ropes just as their children are (personal communication, Nancy Evans, 17 November, 2009). Teachers are able to help students make better choices and are able to help educate and counsel parents and families because of open and trusting relationships developed with individual students and their families. TMECHS, by the participation of faculty and staff in the development of ECHSI and T-STEM design elements has supported family engagement as Desimone (2002) noted was crucial for an effective school environment.

Interview data also supported the idea that the creation and maintenance of a rigorous and supported school culture is not possible without an exemplary teaching staff that not only knows their content but employs effective strategies. The school's principal stated that "the way I think our students are supported the most is with the teachers they have and making it a priority to hire teachers that are really strong in their content area and their delivery" (personal communication, 9 November, 2009).

Teachers were described as going above and beyond what was required of them, bending over backwards to work with students. While other components of an early college high school are equally important, the principal stated acknowledged that "without that teacher piece, there it is not going to get them enough support to be successful" (personal communication, TMECHS Principal, 9 November, 2009). She confirmed that the teachers at TMECHS are diligent in applying their skills to helping students succeed. This discussion foreshadows subsequent analysis in Theme 2 with regard to the professional development requirements placed on TMECHS faculty. Analysis revealed that some of the externally required trainings and programs are

excessive and ineffective for two main reasons. First, administrators noted that teachers are handpicked, hired for their specifically applicable expertise. Second, much of the professional development externally provided is not new, but redundant and repackaged, yet still enforced.

Still, staff development was described by administrators as necessary to ensure that teachers have an arsenal of strategies and methods to help them help students be successful on difficult tasks and with difficult material. It stands to reason that if the ultimate goal of any educational reform is to improve teaching and learning "through the introduction and spread of potentially powerful external reform ideas" (Cremin and Cuban, in Tyack and Cuban, 1995, p. 60), then an effective program and ultimately a school's culture is dependent not only on teachers, but on administrative support and facilitation of their activities. This investigators critique will center on the idea that strategies are for the most part not new, yet are required and in the manner that external funding agencies dictate. One administrator stated the obvious; that there are always strings attached to grant money. In analysis, admissions and recruitment stipulations and external professional development are examples of such strings.

Family Engagement

Family engagement and the programs and processes that facilitate were described as vital for an effective school culture. EPISD's Chief of Staff Terri Jordan commented that when she was involved in planning processes on the steering committee, the importance of the development of a strong Parent Teacher Association was discussed (personal communication, 4 February, 2010). The steering committee

recognized that parents and guardians needed to be involved in the operation of the school to help educate parents and students in what an early college high school is and the expectations that come with it. Attention to parental awareness and an understanding of expectations at TMECHS has helped the school's faculty and staff effectively adopt, design, and implement initiative efforts, as Desimone (2002) noted could happen. Further discussion in theme 2 will show how partners designed admissions and recruitment processes to try to ensure that students and parents understood what they were getting into, but given the context and demographic of El Paso, analysis suggests that the logistics, although sound, are not sufficient to ensure a suitable student population.

Teenagers in College

Several participant interviews added data with regard to the necessity of both partners engaging in effective outreach efforts explained that EPISD and EPCC planned and implemented processes prior to the school's opening. But because admissions processes are dictated by grant funding, while processes were found to be logistically sound and to follow external guidelines, this investigator proposes that efficacy can only be gauged by implementation and outcomes. For example, an issue regarding TMECHS students as teenagers in a public school system has to do with the delivery of courses. The provision of college courses was discussed by the steering committee prior to the school's opening. Decisions were described as having been made to ensure that the early college high school culture could develop without misconceptions. After steering committee members discussed the issue, a decision was made that there would be no modifications expected of college class delivery for early college high

school students. This, in analysis, was a decision that had to be made; in order for an early college high school to effectively confer college credit, it must be recognized and acknowledged that the students are college students. And students and their parents agree to what they are getting into on school applications and in the signing of commitment papers at interviews. Having said this, one must acknowledge the caution of Tyack and Cuban (1995) that legalities and requirements cannot guarantee how policy will be implemented; that it is ultimately the responsibility of the educators themselves to ensure that laws and regulations are not "discreetly ignored" (p. 57). What teachers do in their classrooms is and will always be based on individual, personal decisions and actions and will be influenced by context.

Still it is important to note is that the partners admitted to taking steps to ensure that college faculty would understand the circumstances inherent in the provision of an early college high school program. EPCC's Vice President for Instruction discussed the college's position with EPCC staff in many ways, including a Faculty Development session and a meeting of the Faculty Association. Individual EPCC Faculty might still change their course delivery with younger students in attendance. Similarly, teachers at the school must be diligent not to water down the delivery of college objectives when students react negatively or have difficulty digesting it. Administrators testified that teachers at TMECHS go above and beyond to help students succeed and are dedicated to the school achieving the goal of offering and ensuring that students receive rigorous high school and college curriculums. In later discussions regarding implications for future research, a qualitative study incorporating teacher interviews could reveal

whether going above and beyond necessarily equates to students receiving rigorous high school and college curriculums.

Concluding Remarks

The manner in which administrative partners worked together and planned ahead exemplifies conscientious program conceptualization, an important factor in the design process for successful experiences and results (Supovitz and Weinbaum eds., 2008, p. 1). Analyses of the influence of external policy directives, as well as outcomes, perhaps the ramifications of process design will be discussed in subsequent themes. For the purposes of this theme, school culture, administrative partners described processes that were collaboratively designed, and implementation that was interactive and supported.

An example of thoughtful planning and implementation based on external requirements leads into the next theme, the merging of T-STEM into ECHSI. Recruitment and selection, although limited by T-STEM criteria, was described as having been designed to mediate its limitations. Still, although its design was developed thoughtfully, outcomes and investigator experience as a TMECHS teacher beg research into student motivation as an indicator of success and fit in an early college high school. The stipulations that limit recruitment and selection will be fully explained in theme 2, Merging of ECHSI with T-STEM, and associated ramifications will be speculated on in analysis.

Noted here are the ways in which policy and process are designed to disseminate comprehensive information. A parent or guardian is required to attend an awareness session with the student and a commitment is required from the parent or

guardian that they will support their child prior to the start of the school year. Before school opens and during the school year, expectations relative to the involvement of students, parents, and families are explained. EPCC's President characterized the initial process as "making sure (students and parents) understand before they ever agree to enroll their son or daughter that there is no misconception; this is going to be hard" (personal communication, EPCC President, 7 December, 2009). Once the school year begins, parent meetings and staff and teacher communicative efforts are implemented to keep students and their families apprised of ongoing and new expectations and requirements.

THEME 2

MERGING OF ECHSI WITH T-STEM

Introduction - The Planning Process, Incorporation of STEM Requirements

A strong campus culture that incorporates appropriate rigor and support, as well as a dedication to initiatives' goals and objectives, begins with the planning process. In the case of TMECHS, administrators described the planning process as rigorous, in part because of the requirements involved in the merging of T-STEM with ECHSI. During a year-long planning period prior to the school's opening in August 2008, as many as 40 different professionals were involved in the development of the school's design at one time as members of a steering committee. Interviewees described the planning processes as mind boggling because of the attention and consideration that had to be applied in the creation and specification of policies for student enrollment, course selection, degree plans, and family engagement. Administrators described their development of policy and processes as Desimone (2003) had proposed they should

be; guided by a grand design already placed on the local partnerships, but utilizing management techniques, organization, and decision making processes to determine their character and the manner in which they would conform to the ECHSI and T-STEM models and their ideals. Because only administrators were interviewed, results beg for additional research into the impact of processes on student experiences and achievement. Subsequent studies in which teachers and students are interviewed could reveal correlations and contradictions among the perspectives of administrators, faculty, staff, students, and guardians with regard to academic policy and its impact and efficacy.

Challenges inherent in developing processes for a majority underserved and underrepresented population were evident when interview data was analyzed with regard to the manner in which processes were constructed and implementation was carried out to achieve initiatives' goals separately and as a merged directive. Because a majority of the students at TMECHS will be first generation, their parents won't have an "understanding of what it takes to navigate traditional systems" (personal communication, EPCC President, 7 December, 2009). Analysis explains how and why policies and processes were designed to mediate this and other issues, such as the idea that parents and children may not be familiar with what an expectation to complete college coursework means. Admissions and recruitment, college readiness, course sequencing and curriculum development, and the incorporation of rigor with support are just some of the areas that policies and processes were designed to address and mediate.

That all TMECHS students do not have to be STEM majors (the T-STEM Blueprint stipulates a majority) (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009) but that all are expected to a complete rigorous high school curriculum and a transferable associate's degree in four years is important to understand the analysis of data incorporated in this section. Evidence will show that T-STEM requirements have contributed to the school's design and culture in a variety of ways. The merging of T-STEM principles and policy stipulations onto the ECHS design in some ways is complementary, in other ways is reinforcing, but in others still adds requirements and components to the schools mission. Some of the stipulations impose limitations, heighten pressures, increase faculty and staff responsibilities, increase student expectations, and add program requirements. Other policies add supportive components such as professional development and monitoring processes, which while also add responsibilities and requirements, enhance the school's mission and vision just as the other components do. In all of these ways, as Desimone (2002) wrote, at TMECHS decisions made and policy set were guided by a grand design already placed on the local partnerships. And analysis of the planning process showed as well that the steering committee prioritized activities, focusing more on admissions, recruitment, and curriculum design than facilities prior to start up.

Overall, partners in the planning process put a lot of focus on the development of a vision and mission consistent with ECHSI and T-STEM principles as they designed the structure of the school day, addressed state, district, and college requirements, defined paths to achieve two years of college credit, and defined academic and social

supports. All of the processes conceptualized by way of discussion and agreement among partners were designed in the creation of what was hoped to be an effective school structure.

Recruitment and Selection

Recruitment and selection is the first area of the merging of ECHSI and T-STEM analyzed and that influenced programs and processes designed to ensure a rigorous, supported academic program. While recruitment methods and target populations are guided by the Early College High School Initiatives Core Principles, specific processes and limitations are added with the merging of the T-STEM aspect of the grant that funded the startup and first few years of the school. T-STEM Design Blueprint requirements are written to ensure that the majority of the school's students match the ideal target population, those traditionally underserved and underrepresented in higher education. As a result, TMECHS cannot and does not manipulate its student population at all. EPISD and EPCC leadership and grant funding facilitators ensured that requirements and specifications were followed to the letter and then partners, faculty, staff, and external coaches and representatives strive to make implementation effective.

Stipulations in the T-STEM Blueprint (Program Requirement 3.2: Open access) do not change the general view of the school's target population (primarily first-generation college goers and low income) but do limit the student selection process. Based on T-STEM requirements, the student selection process cannot impose admissions requirements or gauge student motivation by way of teacher recommendations or interviews prior to selection (*Texas Science, Technology,*

Engineering and Mathematics Academies Design Blueprint, 27 October, 2009). The limitations on designing admissions requirements effectively increases challenges for partners, staff, faculty, student, and families once education begins.

In analyses, because TMECHS is not just a T-STEM academy, but also an early college high school, this investigator proposes that motivation should be recognized as a key factor in student success and should then be gauged prior to admission. The number of students that can be accepted into an early college high school (100 to 125 per cohort) provides further support for the idea that students accepted from the target population have the motivation to work hard and rise to the challenges ahead. Because the pool is so limited in number, students who would be a better fit for the program will inevitably be excluded. In a way, the T-STEM Blueprint itself contradicts its own admissions and recruitment process in a statement in section II, paragraph 2: “the recipient agrees to provide the innovative merged school setting to “motivated students” (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009).

Several participants referred to the idea that although the majority of students should come from an academic middle, they should have the motivation to work hard. The school’s principal stated that the act of applying indicates motivation, but this investigator doubts this based on context and data. As noted previously, administrators admitted that many parents and students in El Paso do not yet understand the mission, vision, and expectations of an early college high school model. The gift of a small school and its opportunities encourage prospective students and their families to apply and many of these students and their families perhaps have an inadequate

understanding of associated expectations. Rigor is greatly enhanced with the merge of college courses and STEM requirements and this investigator proposes that educators should not dismiss the importance of motivation and fit. Unlike students who attend schools that are solely T-STEM academy high schools, the children in a T-STEM early college high school are not just preparing for post-secondary coursework they are already engaged in post-secondary coursework and primarily with a STEM focus. They are already college students; if they do not come with at least sufficient motivation and understanding of what they are getting into, their chances of success are severely hampered.

The complexity of the program at these early stages should not be denied. T-STEM is younger (2005) than ECHSI (2002) and as TMECHS is held to the original T-STEM blueprint, a blueprint that is already being revised based on feedback from existing schools (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009). Perhaps the stipulation of no admissions requirements except that a student is eligible to move from 8th to 9th grade will be changed in the future blueprint.

With regard to admissions, processes were designed intentionally to raise awareness of opportunities and expectations and were instituted both before and after cohorts are selected via a lottery. These processes are contextualized first within this theme of the merging of T-STEM onto ECHSI and analysis addresses their efficacy. Based on administrator testimony, there was a conscientious effort by the partnership to conceptualize and plan for effective process design (Supovitz and Weinbaum eds., 2008, p. 1) within a context replete with complexities and uncertainties (Malen, 2006, in

Honig, 2006). The logistics of these processes included several steps. At recruiting events, school administrators and college deans speak to parents and students about the school, courses of study, programs, and expectations. After a cohort is selected, the school's principal conducts individual interviews with each student and his or her parents or guardians, in which she explains expectations and requirements. Parent meetings are then held before school starts, as well as during the school year, to educate students who have been selected regarding the school's expectations and opportunities. EPISD and school staff, and college deans speak at the parent meetings and answer questions.

Interviews revealed that administrators were aware of and concerned about the idea that prospective students eligible for admission via an open enrollment policy and their families might not have an adequate understanding of what they were applying for in a T-STEM early college high school. Dr. Jordan commented that the steering committee "wanted to have parents involved...because it was such a new concept" (personal communication, Terri Jordan, 4 February, 2010). She noted that there were parents whose sole reason for applying had been because they wanted their children in a small learning environment (personal communication, Terri Jordan, 4 February, 2010). Their rationale, she continued, "had nothing to do with wanting to get an associate's degree...had nothing to do with college credit...had everything to do with wanting their child in a 15 student class" (personal communication, 4 February, 2010). This discussion leads to the question of whether parents and students would back out if this school didn't seem to be a good fit once selected to such an institution. TMECHS offers unique opportunities and possibilities; many El Paso youngsters and their families,

representative of those who are categorized as underserved and underrepresented, are part of a population that in many ways may not be able to fathom what might really be involved once the education begins. As a result, once the school year progresses, some students may wind up leaving because they cannot muster the motivation to apply themselves to a rigorous program they are not really interested in pursuing. Out of the first TMECHS cohort, 24 of the original 125 left by December of their sophomore year; the majority of whom did so to go back to their home school (personal communication, TMECHS Principal, 10 February, 2010). Further discussions and analysis may not fully explain this phenomenon, yet surely contextualize it. That first year (2008), nobody really knew what the school was going to be like. The school's principal stated that "even though there were schools in other districts, they didn't know what the expectation was going to be from EPISD" and acknowledged that, today, they (the current four early college high schools in El Paso) are not the same (personal communication, 9 November, 2009).

Several administrators noted that funding agencies dictated open enrollment for a targeted population characterized by socio-economic status and ethnicity, leaving little room in the design process except to create a sequence of events to satisfy criteria. The school's principal provided details of how individuals and agencies interacted to ensure that policies became the processes that were implemented. Although guidelines and requirements that set conditions for administration and practice cannot predetermine how decisions will be made (Elmore and McLaughlin, 1983, in Tyack and Cuban, 1995, p. 136), when limitations on process design are rigid, there is little wiggle room in

process design. What this means is that the proof of efficacy is revealed in implementation and outcomes.

Only an application was created by the steering committee before the campus and independent school district personnel took over the recruitment process. While comprehensive, the following explanation shows that process design simply set forth logistics. TMECHS principal, assistant principal, and secretary decided how recruiting would be done and were guided by ECHSI core principles and T-STEM requirements that were outlined in the interlocal agreement (personal communication, TMECHS Principal, 9 November, 2009). The principal explained that the school staff “chose to go to area middle schools” and “to become part of the magnet schools presentations in the evenings”, even though TMECHS is not a magnet school (personal communication, 9 November, 2009). The magnet schools agreed to allow TMECHS to be listed on flyers and share venues.

With recruitment done in the same venue as magnet schools recruitment, one might think that the student populations would ultimately be similar. TMECHS does have almost 26% gifted and talented students; however there are no screening processes. This investigator does not believe that students should be chosen based on ability because all students have great potential. Students should however be gauged for clarity of understanding and sufficient motivation. Although with the best intentions, admissions processes can only serve to disseminate information. The logistics of these processes should now be revisited for efficacy. Based on the school's attrition rates, albeit with regard to the school's initial two cohorts, information dissemination is not

sufficient to ensure that all applicants are fully aware of what they are getting into and/or have appropriate motivation to persevere.

Administrator comments revealed that EPISD was concerned with following initiative guidelines to the letter and processes successfully do this. Specifications from the funding agency, the Communities Foundation of Texas via the Texas High School Project, had been dictated by T-STEM Center; those specifications included that the school select a minimum of 100 students, students satisfy a target population, enrollment be open, and that students could not be screened out by interviews, recommendation letters, or other admissions criteria. Interviews could be held but not for the purpose of screening. The only component that could be construed an admissions requirement is the passing of TAKS in eighth grade, but this is not considered a screening process because it is inherent in being able to move from 8th to 9th grade. Additional criteria noted in discussions about the recruitment and admission of students were described as processes that target those students who “potentially would not have the opportunity to have gone to college, that at-risk population, that group that might have fallen through the cracks” (personal communication, THSP Program Officer, 24 November, 2009). This is in analysis just a more detailed description of underserved and underrepresented students, students who often “have potential but because they are not in the top ten percent may be left behind” (personal communication, THSP Program officer, 24 November, 2009). Aligning with key concepts of ECHSI and T-STEM, TMECHS under the direction of EPISD did begin its design processes by reaching out for students who might otherwise not have the same opportunity. Still, with open enrollment and a lottery system in the El Paso border

community, heaviest recruitment did not have to target low income areas first or middle schools that had the lowest income or highest rate of students that at risk.

Comprehensive recruitment efforts and a lottery system ultimately satisfy recruitment requirements for ECHSI and as long as the lottery is not manipulated and there are no admissions requirements besides eligibility to pass on to 9th grade, T-STEM specifications are also satisfied. Analysis therefore showed that TMECHS and its partners fulfill T-STEM and ECHSI objectives fully with regard to student recruitment and selection. Still, notable is that while the requirements followed to the letter were very specific, in the El Paso community, because of its demographics, a majority target population could virtually be guaranteed without such specifics.

This discussion of the comprehensive nature of the recruitment process shows that it was designed not only to satisfy parameters prescribed by T-STEM and ECHSI, but also to attempt to mediate the challenges of its limitations, to attract motivated students, and to educate those students and their families with regard to the opportunities that a T-STEM early college high school affords. Limitations referred to are of course that letters of recommendation by teachers and a screening interview cannot be implemented; therefore an interview can only be an awareness session after selection. With regard to educating prospective students and their families about the opportunities that a T-STEM early college high school represents, the principal and her staff go out to the community and talk to people at civic organizations to spread the word about the program. At recruitment nights, EPCC Dean Smith discusses the benefit of TMECHS being a STEM school, that students incomes will be much higher than if they pursue careers in other fields, and that as STEM graduates students will be able to

help "build our country's standing and ranking in those areas" (personal communication, 7 December, 2009). Dean Smith also touches on the idea that "EPCC can provide research opportunities, more than at another community college" because of how its faculty has "secured grants for research" (personal communication, 7 December, 2009), a crucial component to the T-STEM ECHSI missions, the ability to enhance goals associated with preparing a diverse population for success as individuals and in ways that benefit society and the economy (Southern Regional Education Board (SREB), 1999-2009). By rights, the extent to which the school's mission and opportunities are explained should help students and their families truly understand the rigor, expectations, and opportunities of the school.

Ultimately, the interview process, conducted by the principal after selection could be characterized as a critical factor in the recruitment process because it is virtually the last opportunity a student and his or family may have to break away from commitment cleanly. As stated previously, however, this investigator speculates that not many students and their families are likely to back out, firstly because of the opportunity an early college high school represents and secondly because they may not be able to fathom the extent and complexity of the commitment. Interviews revealed that the school's principal has consistently shared the school's vision and expectations with students and their families prior to their signing of commitments to TMECHS and has reminded students that success at high school and college work is expected once enrolled. She has also counseled students that they will be giving up opportunities that are representative of the districts comprehensive high schools, such as being in a marching band or on a football team. The implementation of interviews after selection is

then charged with ensuring that “every applicant fully understands that” (personal communication, TMECHS Principal, 9 November, 2009).

There was some evidence that implementation of the interview process after selection did have an impact on some students and their families with regard to clearing up misconceptions. Some students admitted during interviews that they didn’t understand that there were no sports teams and thus decided not to attend (personal communication, TMECHS Principal, 9 November, 2009). Even though, in public forums, the elements of comprehensive high schools that would not be a part of the early college high school experience had been discussed, data showed that circumstances are quite different in one-on-one situations and it is in these situations and in depth discussions that revelations are made. Because people are more likely to ask questions, the principal told me that students have changed their minds after selection because they wanted to participate in sports for example, noting that approximately ten students per cohort have backed out after selection (personal communication, TMECHS Principal, 30 March, 2010).

It is important to add in an analysis of student recruitment, however, that students who do not fit the profile of underserved and underrepresented are not shut out and have equal opportunity to apply and be enrolled. Because of Equal Employment Opportunity Commission (EEOC) regulations, these students cannot be denied access (U.S. Equal Employment Opportunity Commission). Discussions with EPCC’s Vice President illuminate how although a majority of students should fit the ECHSI and T-STEM target population, strong students can serve as role models and can help weaker students. All in all, a diverse student population with a range of abilities in several

aspects, academically, ethnically, and socially, can help develop a strong learning community. TMECHS, with 26% gifted and talented students and a range of students does satisfy this model.

Finally, EPISD requested that the number of students to be enrolled in each cohort be increased to 125 and the steering committee agreed (personal communication, TMECHS Principal, 9 November, 2009; personal communication, Terri Jordan, 4 February, 2010). The district's reasoning was that El Paso has a lot of military families and because it is a border community, there is often considerable transition and movement. In addition, here, it would stand to reason that the addition of 25 students over the prescribed 100 per class may have been considered to ensure that if students left for personal reasons, there would be a cushion. Ultimately, everyone on the steering committee agreed that the school "might lose some students over the course of time" so the extra 25 students was built in because that attrition might occur if some students left the area or opted to return to their home school (personal communication, TMECHS Principal, 9 November, 2009; personal communication, Terri Jordan, 4 February, 2010). It would seem that with the attrition in the first year's cohort, the fact that the number admitted was raised to 125 was a good call. It is still concerning that 24 of the current sophomores have left and 10 of the current freshmen are gone. And it is perplexing in analysis that even though TMECHS was advertised in venues with magnet schools, was comprehensively described to audiences at recruitment events and in interviews, and has enrolled a diverse student population to enhance the supportive aspect of the environment, based on the first cohorts attrition rates, it seems that a good number of

the students enrolled may not have been as motivated as they should have been or may not really have understood what they were embarking on.

To further clarify analysis, one must question whether strictly open enrollment is the best way to structure recruitment and selection because it may lead to perhaps a handful of students and their families in a situation for which they are not a good fit. Ultimately, in the conclusion that follows the themed analysis, a recommendation is made to incorporate teacher recommendations and an interview prior to selection for the lottery. Within El Paso's demographic, the target population would be served and perhaps some students who would be a better fit and would thus better benefit from the T-STEM early college high school model would have an opportunity to enroll and excel.

In sum, in this section on student recruitment and selection, analysis of interviews with EPCC personnel provided evidence of an open and trusting relationship between the college and the school district, even though discussions at times alluded to the idea that the college might allow EPISD to have greater decision making control in the design of processes at TMECHS. Still, TMECHS' policies with regard to recruitment and admissions were constrained by T-STEM requirements. EPCC's Vice President noted that the college has never intended to dictate how students will be recruited or enrolled at any of the early college high schools in El Paso (personal communication, 25 January, 2010). EPCC understands the students must first and foremost earn a high school diploma even though they are also enrolled at EPCC wants TMECHS to have a diverse population that reflects the characteristics that Gates, TEA, and THSP would like to see targeted; many interviewees added that that represented the very same population (to a large extent) that is taught at EPCC.

What was ultimately revealed as well in this analysis is that EPCC does not tell the schools how to go out and get their student population, yet would step in if one of the early college high schools became elite. None of the administrators I spoke to anticipated that that would happen. Still, perhaps there should be a concern that an appropriate student population is admitted so that on the one hand, deserving students who fit the target population are included and those who would be better served in a comprehensive high school are not enrolled and then unhappy.

Once the School Year Begins

Once the school year begins so do high expectations and lots of support, as the students become an integral part of the campus culture, influencing and being influenced by policies and processes, and interacting with partners, staff, and faculty on a daily basis. As Honig (2006) wrote, at this stage of implementation, what was paramount was not simply that the educators were implementing policies and processes, but how they were implementing them. EPISD's director of college readiness commented that "the challenge for this particular school was to see if you expect more and you have good instruction for all students, will they not rise to the occasion?" (personal communication, Nancy Evans, 17 November, 2009). She described TMECHS as being "almost like an experiment" with parameters dictated by a grant that makes the school's mission seem "more risky" (personal communication, Nancy Evans, 17 November, 2009).

Although TMECHS' mission incorporates high expectations and a small learning environment and does admit some high achievers, the school can be described as the

opposite of a magnet program simply because magnet programs are competitive and selective with higher achieving students. With a small percentage of their total population gifted and talented, EPISD expects all TMECHS_students to earn an associate's degree in four years even if they did not excel in middle school (personal communication, Nancy Evans, 17 November, 2009). EPISD's director of college readiness explained that the grant dictated these terms, characterizing them as "the strings attached in grants", but then showed the type of tenacity and dedication that partners and administrators routinely represented in interviews. Ms. Evans said that educators must truly believe what they say, "college for all Texans...students rise to the expectations, if we have small learning communities, if we offer intervention immediately, if we have tutoring on different levels, get parent involvement, we will have a successful student" (personal communication, Nancy Evans, 17 November, 2009). At TMECHS, the strategies are all in place; the school itself is a small learning community with hand-selected faculty. Students are provided with counseling, individual attention, and academic support. But as a teacher, this investigator must ask whether all of that is enough if the motivation and application is not present in a student. And one must consider a subsequent study on the efficacy of counseling and academic support. A study of this type could correlate teacher, student, and parent interviews, and data on outcomes such as grades, course completions, and attrition.

While the design of an early college high school is best served if a diploma and a degree are earned within four years because otherwise students could enjoy the culture of a traditional high school and take dual credit to earn some college credit, this statement is qualified by the acknowledgement that many of today's high schools need

to increase rigor and expectations. And some students will fit in better in a small environment than they would in large comprehensive high school. Still, Ms. Evans described processes being designed and implemented by the school district in its comprehensive high schools to increase rigor, college readiness, and to provide opportunities to prepare for a variety of career fields. Analysis in this regard is further illuminated in theme 3 in a discussion about how TMECHS has already become a model for area high schools.

When the school's principal discussed the importance of student motivation with regard to meeting the challenge of a STEM early college high school education and said that "the motivation has to be there in any student who has applied to come here" (personal communication, 9 November, 2009), she did qualify her statement: "You sometimes have to search for it and pull it from them, but all of them have it to have applied to come to an early college high school" (personal communication, TMECHS Principal, 9 November, 2009). Displaying the type of positivism that good educators must have, the principal proposed that all of TMECHS students want to be successful, want a college degree, and want to make something of their lives. This could be construed as optimistic. At the age of thirteen and together with their parents perhaps not able to grasp the reality of the expectations that will be associated with college coursework, many students may not have enough motivation, especially when that motivation was not gauged prior to the selection process. Elaborating on previous critique, one could ask whether it is fair to put young students (and their families) in a situation for which they are not a good fit, even if it turns out to only be a few.

Course Sequencing and Degree Plans

The first step in putting students on track for a high school diploma and a college degree is having students do a degree plan. Although all students at TMECHS do not have to declare a STEM major, EPCC's Vice President noted that "we would like a fairly large number to be STEM majors" (personal communication, 25 January, 2010). EPISD has the same expectation.

In order for students to be able to take courses necessary to complete degree plans that merge high school and college coursework with the least amount of duplication, students must achieve scores on placement tests that clear them of the Texas Success Initiative (TSI) and place them into entry level college classes. EPISD's Chief of Staff discussed how great the concern of the steering committee was that eighth graders and high school freshmen would be assessed for college readiness by the ACCUPLACER tests (personal communication, Terri Jordan, 4 February, 2010). During TMECHS first and second years there was no exemption allowed by way of 2200 scores on the TAKS, although as of this spring 2010 and for future cohorts, those exemptions will only be able to help rising juniors. Because early college high school students at TMECHS begin taking dual credit classes in their freshmen year, the exemption will not affect the program substantially, except for mathematics placement. Students must complete high school mathematics requirements before they can take any dual credit so they have not been scheduled for dual credit mathematics in their freshmen and sophomore years.

Because of the impact ACCUPLACER can have on student status with regard to dual credit, interventions to help students prepare were very important and thus well-thought out and well-planned. Dr. Jordan explained that, "Transmountain was really the first time [district-wide] we did that; we implemented an intervention for ACCUPLACER, simply because of the need" (personal communication, Terri Jordan, 4 February, 2010). As she discussed the format of the workshops, it was evident that the design of the workshops had resulted from interaction among staff, faculty, and students at the school. Processes were dependent on ongoing assessment and were developed based on experiences and circumstances. Dr. Jordan described workshops staged during summer bridge programs and throughout the school year as stair-stepped. Depending on how a student fared on a test, subsequent workshops and tutoring sessions would be tailored to fit the student's needs. The support was there; the teachers planned and conducted the workshops. Dr. Jordan said that she believed the greater focus at Transmountain on interventions was because of the goal to ensure every student be ready to take dual credit and college classes as soon as they could and to keep them on track towards the high school diploma and the associate's degree within four years (personal communication, Terri Jordan, 4 February, 2010).

An example of the co-constructed nature of implementation that incorporates influence from students and teachers and district personnel can be seen in programs and pressures associated with passing ACCUPLACER. Students feel pressure when they haven't passed a placement test and that circumstance keeps them from taking college level classes. School administrators and teachers are then pressured by the school district to help the students become college ready. Workshops are revised and

rescheduled. Students must take their focus away from their regular coursework to prepare again and teachers must provide the workshops after school and on weekends. Everyone involved recognizes the importance of passing the test, which as every good study skills teacher knows, can produce test anxiety, hindering success as opposed to encouraging it.

Another angle on college readiness is the daily rigor of college and STEM coursework and the expectation that students keep up. The principal and staff of professionals at TMECHS understand that to rise to expectations, faculty and students must consistently “make a concerted effort to not water down what we are doing if the students are not there yet” (personal communication, TMECHS Principal, 9 November, 2009). Students, the principal said, “will rise to that expectation, at different paces, but they can get there” (personal communication, TMECHS, 9 November, 2009). Again, the principal is an optimist; however, TMECHS provides support mechanisms by way of teaching strategies such as Socratic Seminars, the incorporation of study skills in lessons, tutoring in the classroom and after school, and the AVID class requirement. These strategies and more support rigor in an environment where teachers develop adaptable teaching styles and where many students do rise to expectations.

TMECHS faculty members routinely incorporate a variety of practices into their instructional designs in order to set high expectations. First, the use of college course syllabi sets a high expectation. Students prepare and participate in group assignments, project based learning, and technology-based presentations. Teachers incorporate questioning strategies to allow students to take charge of their own learning. The principal remarked that the “teachers have that laid out in what they are doing to make

sure the kids are successful" (personal communication, TMECHS Principal, 9 November, 2009). An Early College High School External Coach helps staff and faculty "keep the rigor at where it needs to be" she added. The coach helps teachers develop their skills. Understanding that maintaining rigor on a daily basis is not easy, the coach "brings tips in that other schools might be using" (personal communication, TMECHS Principal, 9 November, 2009). But it is not all up to the teachers at TMECHS. Students must be held accountable for timelines and are weaned away from having their teachers tell them every day what is expected of them.

The next discussion with regard to the merged academics of a T-STEM early college high school has to do with external coaching support provided by the Texas High School Project during the school's second year. Administrators characterized both external and internal professional development activities as very important. Dr. Jordan commented that a fresh set of eyes can see something you hadn't realized, while internal people who are dedicated and familiar with the population you are dealing with can provide a different kind of insight into how processes are unfolding and working in practice (personal communication, Terri Jordan, 9 November, 2009).

While professional development is important and input from external and internal professionals can be instrumental in the development of skills and strategies, because of coupling of grant funding agency requirements and scrutiny with EPISD and EPCC professional development and evaluation, teachers are in a fish bowl, routinely visited, observed, and asked to perform extra duties. Requirements associated with the implementation of professional development activities takes time out of entire school days, conference periods, and after school; time that may sometimes be better spent

preparing lesson plans, teaching, tutoring students, grading papers, and providing feedback and mentoring to students. Referenced again is the idea that teachers were hired because they were highly qualified and because they had proven track records as having successfully worked with struggling student populations. And while some professional development may be new, much of what is presented is the same if not similar to what teachers have learned before, albeit repackaged.

To create a rigorous, collaborative, college-going culture for a T-STEM early college high school, analysis here addresses how processes took considerable planning and cooperation among professionals from EPCC and EPISD. Deliberations and subsequent agreements exemplify that the intention of administrators was an optimal design for the merging of T-STEM and ECHSI. Partners endeavored to ensure smooth transitions within secondary and higher education for students by designing a good blending of coursework, transferrable courses, and articulation options (ECHSI, 2008). Following is a discussion of the details of the planning processes as described by administrators that shows conscientious program conceptualization and effective collaborative efforts, but that ultimately cannot provide evaluation for efficacy and whether design then is truly optimal. These types of evaluations again would have to be conducted via investigation of outcomes and qualitative research incorporating teachers, students, and family members.

Still based on this study's design, it is important to contextualize and elaborate on the model that TMECHS and its partnerships provide. Administration and partners collaborate effectively, which is not as common as one might want to think. The first description concerns how the principal described in detail the way planning was done by

a steering committee, initially comprised of 20 EPISD members and about 20 EPCC members. This huge committee was divided into groups to tackle the many facets of creating a school with a unique and difficult mission; sub-committees such as facilities, curriculum, and marketing (personal communication, Dean Smith, 7 December, 2009). Teams were each comprised of professionals from EPISD and EPCC. One team, specifically assigned to work on the academic plan was made up of facilitators in core subject areas and from the gifted and talented program and Superintendent's staff from EPISD, as well as representatives from each of the core subjects and academic deans from the Transmountain EPCC campus. A college liaison was also designated for TMECHS from EPCC.

The committee, the principal said, "looked at the plusses of offering dual credit and AP classes at the same time, and this campus opted to go with just dual credit" because it would best benefit the students. "We would do the Pre-AP and then we would do the dual credit" the principal said, "but we would also enable our students to take the AP exam if they wanted to test out of a course" (personal communication, TMECHS Principal, 9 November, 2009). The group discussed the options and decided that because students would be able to get dual credit in so many areas because of the partnership with EPCC, AP might not be needed (personal communication, TMECHS Principal, 9 November, 2009).

Curriculum alignment was addressed by the committee with regard to merging the Distinguished Achievement Plan (DAP) for high school graduation with associate degree plans. True alignment was sometimes an issue and committee members acknowledged that they needed to consider what teachers might be asked to do to fill in

gaps if high school and college courses did not fully align for dual credit. When alignment was far off, the committee members made a determination that some classes could not be offered as dual credit. When TAKS testing was scheduled for certain subjects had to be considered when accelerating students in those subjects was possible. Even though TMECHS students are working towards an associate's degree in four years, they must still be successful on TAKS and should not then be ahead or behind where a particular TAKS test will fall.

An analysis of curriculum alignment and dual credit leads to a discussion about how some dual credit classes do not necessarily align because course sequences are different. On the high school side, benchmarks are still required even when EPCC syllabi objectives and EPISD scope and sequence do not follow the same order. In dual credit US History 1301 for example, teachers must teach material on the high school curriculum in the fall semester when it is not on the college syllabus at all (until the next course, US History 1302) if students are to be ready for benchmarks. This proves difficult because although there are more hours dedicated to a high school semester and it is those extra hours that teachers are instructed to use to ensure the high school curriculum is covered, when a course follows a sequence as history does, to have to jump ahead can prove difficult for the students.

The reality is that EPCC requires their course be taught and EPISD expects their scope and sequence to be followed. While this researcher acknowledges the rationale that teaching college courses in a rigorous fashion should prepare students not only in college expectations, but with regard to high school expectations as well, most teachers will hesitate to take the risk. After all is said and done, the requirements of EPISD's

scope and sequence are still required and are not formatted or presented in the same manner as college objectives. College courses incorporate much more depth and specificity. In essence, much more information is expected to be covered and learned. High school curriculum packages information in the manner that it will be tested. Add the pressure to produce exemplary results on TAKS and the reality becomes that two curriculums must be merged and that merge and its presentation is the responsibility of the individual teachers. EPISD's Chief of Staff acknowledged that the merging of college and high school curriculums was worthy of investigation. Still, interview data supported the idea that dual credit classes are taught well at TMECHS, that teachers merge objectives comprehensively and employ strategies to maintain rigor and relevance.

Several participants referred to the idea that since TMECHS was designated a T-STEM early college high school, the goal in the eyes of the steering committee was that a majority of STEM majors equated to only a few not pursuing STEM. Dean Smith commented that "there was a lot of conversation early on about whether we were going to force students to be STEM majors, but then we made the decision...that students may not know early on what they want to do, and they may want to explore other careers, so let's give them that opportunity" (personal communication, Steve Smith, 7 December, 2009). The Dean continued, however that members of the steering committee were "hopeful" that the number of students who would opt not to pursue STEM would be very small. "So far it has" he said. Only a few students in the first two cohorts have chosen degree plans in criminal justice or education (personal communication, Steve Smith, 7 December, 2009). This position of the steering

committee most likely influences advising processes with students, even if it is only with regard to the encouragement to choose and remain STEM majors. A desire to have many more STEM majors than just a majority was found in evidence from interviews in which several participants discussed how because TMECHS was the first STEM focus early college high school in El Paso there was a special interest on curriculum, so much so that the "curriculum committee grew very large" (personal communication, Steve Smith, 7 December, 2009), posing challenges of its own. As noted in early analysis, the committee was pared down because of the difficulties inherent in managing a group so large, let alone coming to consensus on issues.

EPISD facilitators and EPCC faculty specified exact courses that would match up for high school and dual credit and what would have to be taken as college courses only. The committee had chosen the Distinguished Achievement Plan as the model for high school courses because it was the highest level of high school graduation. The decision was also made that every student should graduate with an associate's degree and a high school diploma in four years.

Degree plans were given a lot of thought. Science experts (faculty members) formed a subcommittee to investigate what was going to be crucial for STEM and also to ascertain what EPCC and EPISD could offer that maybe others couldn't (personal communication, Steve Smith, 7 December, 2009). The committee looked at bachelor's degrees and what students need to get in the first two years and what EPCC could offer. STEM associate's degree plans and a general associate's degree plan were designed. Committee members agreed that students might change their minds and never intended their designs to be immovable objects. Although not done in initial

steering committee planning, specialized degree plans are now being created. In the beginning, coursework in general plans would simply be labeled Science, for example, with the understanding that once students chose specific majors, applicable science courses would be specified (personal communication, Steve Smith, 7 December, 2009). So a framework was built for each student's four years after taking into consideration several factors and with the understanding that once the school actually opened, individual degree plans would be changeable, adaptable.

A misconception in the beginning of curriculum discussions was that students could be taken through their first two years in "lock step, all freshmen and sophomores would take the same classes and it wouldn't really be until their junior and senior year that they would start to take courses specific to their chosen degrees" (personal communication, Steve Smith, 7 December, 2009). The committee soon realized that that would not be possible because of how many different sciences and degree plans EPCC offers and because of how many different professions there are in the sciences. Still, Dr. Jordan explained that for the school's first year, the steering committee picked four areas in the STEM area and matched up courses for degree plans (personal communication, 4 February, 2010). The committee agreed that it wouldn't be necessary for students to take college classes in the first semester in order to finish an associate's degree in four years. All in all, at the sophomore level, degree plans are already individualized, which is "a little more challenging" than the committee initially expected (personal communication, Steve Smith, 7 December, 2009). The main committee considered input from many, for example example, an EPCC chemistry instructor cautioned not to offer dual credit chemistry before 10th grade. Using this type of

information, and input from representatives from El Paso's other early college high schools degree plans were built (personal communication, Steve Smith, 7 December, 2009).

EPISD's Chief of Staff described the challenges as not so much in the planning process for course alignment and sequencing but with regard to "getting people to understand what we were doing" (personal communication, Terri Jordan, 4 February, 2010). She explained that many EPISD partners did not believe students would be successful, and that likewise EPCC partners said high school students could not be expected to do college work. The rationale and argument to convince the skeptics was always the same, that given the right amount of support students could be successful (personal communication, Terri Jordan, 4 February, 2010). Even though perhaps more course sequences could have been designed early, on planning processes incorporated a focus on the ideal outcomes of ECHSI core principles as partners rethought "traditional curriculum sequences", found "creative ways to align and connect high school and college experiences", and provided "academic supports students need to succeed in an intensive early college program of study" (Overview & FAQ, 2009, p. 1).

STEM and the other associates degrees planned for were all transferable degrees, Associate of Science or Associate of Arts degrees. EPCC's Vice President discussed the idea that students are expected to earn transferable degrees as opposed to non-transferable degrees (personal communication, 25 January, 2010). Dean Ritchey described the understanding of most EPISD and EPCC administrators from the school's inception as that "the vast majority of the students going through this are going to continue on to get a baccalaureate degree" (personal communication, Joyce Ritchey, 19

November, 2009). Both of these administrators agreed that perhaps, given the option, a few students might decide on an Associate of Applied Science degree. While EPCC is there to support the goals of the school, they are "open to working with any one of our early college high schools" to support students who want to pursue an Associate of Applied Science degree (personal communication, EPCC Vice President, 25 January, 2010). But, Dean Ritchey noted, for those kinds of discussions to happen, "the district really has to step up and say what they will be open to" (personal communication, Joyce Ritchey, 19 November, 2009). There are reasons why some students may not earn their associate's degrees, but it will not be "because we did not give them the opportunity to" said EPCC's Vice President (personal communication, 25 January, 2010). The pursuit of an associate's of applied science degree, such as Fashion Merchandising or Culinary Arts is "not actively promoted" (personal communication, EPCC Vice President, 25 January, 2010), even if it might ensure that all students complete an associate's degree in four years, because is it not the "preferred model", (personal communication, EPCC Vice President, 25 January, 2010). While 42 of the 60 hours for an AA or AS are core or general education, only 15 are core that can transfer in an AAS. All said, even though it is not a preferred model, EPCC has not said that students at their early college high schools could not choose one of the AAS options. In analysis, this researcher believes that there may be students who could be benefiting from the option of an applied associate degree, especially based on how the selection process was constrained. Even if it is just a handful of students, they may be happier and more successful at this stage in their life if given the option.

The committee also realized that because TMECHS is a T-STEM school, it would be important to require all of the students to complete a research project before they graduated. As they discussed this issue, they knew that to become DAP graduates students must also complete an advanced measure, which could also be satisfied by the research study (personal communication, TMECHS Principal, 9 November, 2009). All then agreed students needed to do a research project, no matter their major so the research project went into all the degree plans. Completing research as an undergraduate is a trend for students to start their research careers very early and not wait until graduate school or even until their senior year at a university. Students are much more competitive if they have a track record in research and that experience also helps them develop skills and contributes to the high expectations of the school's culture.

Closing out this section on course design and sequencing and providing one last piece of evidence of the collaborative efforts between EPCC and EPISD professionals, following is a discussion about the difficulty current sophomores had with the dual credit chemistry curriculum. In this analysis, EPISD's high expectations combine with the support and expertise of EPCC. EPCC faculty and administrators stepped in when current sophomores did not complete the required EPCC curriculum by the end of the fall semester 2009. Students were required to take a comprehensive final exam and except for a few, did not pass it. Consequently, the students received incompletes and were required to finish the course requirements during the spring semester. By April 15, 2010, all sophomores had earned college credit for the fall course under the tutelage and guidance of TMECHS dual credit chemistry teacher. These facts show that while

EPCC personnel primarily provide advice and support and allow EPISD personnel to administer frameworks and course components, they will impose their expertise when necessary.

Support Structures

Design and facilitation of support measures built into the school day was a key consideration brought up by campus staff to the steering committee during the planning process. Because some of the students may have barely passed 8th grade, it was deemed important to design processes to help all students be academically successful. As a result of subsequent discussions, the AVID (Achievement via Individual Determination) program was embedded in the students schedules. It was listed for all four years, but there was an understanding that if it wasn't considered appropriate or necessary after implementation, that plan could be adjusted (personal communication, TMECHS Principal, 9 November, 2009). Evidence of the assessment of processes using hindsight is found in a campus decision to revise the AVID plan and not require students to take the course for all four years unless it is perceived as a need.

Once the school opened, the steering committee disbanded except for central membership, which became a leadership team of TMECHS and EPCC staff that would meet once per month when the school opened to review operational issues and how students were performing. Some of the issues that the team has looked at include when to test students on ACCUPLACER and whether or not students should take the SAT or the PSAT exam. Discussions include operational issues that ultimately everybody has to agree upon. Sometimes the group has had to conduct research to ascertain

appropriate course codes for example before reconvening to decide on a course of action. With regard to this issue, administrators once again provided evidence of collaboration and the co-construction of implementation processes.

Still, the biggest operational issue of the leadership team was described by the principal as members able to make the time to meet and thus create ongoing communication. Attesting to the goals and dedication of the partners, a leadership team was not directed by the grant, but was instituted because partners agreed that a mechanism to facilitate open communication would "enable a smoother operation between the two entities" (personal communication, TMECHS Principal, 9 November, 2009). Yet, if the team does not meet, then the intentions are for naught. While it is understandable that members would be busy with their respective jobs, because the school is only in its second year of operation and should have to either revisit original program designs or create new ones, diligence in meeting and having discussions should be considered crucial to the maintenance of a school's success, let alone environment. And even if partners can seek one another out to discuss problems and solutions, regular meetings with key personnel should be a priority.

Ultimately, the most important idea that came out of discussions about the steering committee has been that all involved agreed from the beginning to engage in the planning of sound and feasible processes that would address current needs and future goals (Tyack and Cuban, 1995, p. 132). Partners agreed as well that if any aspect of the design needed to be changed, programs or processes could be revisited at any time. It is yet to be seen, because the school is so new, how enthusiastic and comprehensive the evaluation of current processes and ability and willingness to revise

those processes will turn out to be. In the interviews this investigator conducted, administrators suggested that because of the comprehensive planning process and the dedication of those involved in it, that the foundation for TMECHS has not been changed. The principal explained this circumstance as being the result of original plans that were detailed and clear with both sides fully understanding the commitment when plans were conceived and ironed out (personal communication, TMECHS Principal, 9 November, 2009). This investigator does not doubt that plans were detailed or that both sides fully understood their commitments to the plans and their efficacy. Returning again to a substantive critique, while the evidence in this study revealed that planning was collaborative and comprehensive, it would be in implementation studies that incorporate students, faculty, and family members coupled with outcomes data that program and process efficacy, as well as design flaws and strengths could be illuminated.

TMECHS foundation is solid, but much of what was agreed upon and created in the planning process concerns specific program requirements that may very well need to be revisited and input into redressing policies and processes can only come from experience implementing them. Regular meetings of a steering committee could help to ensure that processes are evaluated and potential major and minor changes can be discussed. Implementation research incorporating those who are involved in and impacted by processes would enhance the efforts. In any organization, individuals can initiate discussion, but without evidence and attention to it in a venue and with personnel who can effect change, real change is hard to prompt and make happen. A reconvened steering committee would bring together people who could reach

compromises and make decisions; if necessary these committee members would have access to others with greater clout.

When flawed processes are not revisited, they often wind up being amended in practice. While this is a phenomenon of implementation, characterized as schools changing reform and reform changing schools, in an operation so new as TMECHS, a mechanism to facilitate policy and process revision should be a vital reality. While still in its early stages, with just two classes so far, hopefully certain processes, such as student recruitment and selection, degree plan advising, and the merging of high school and college curriculums will be revisited in a venue and by personnel that will be able to effect real change.

THEME 3

TMECHS AS A MODEL FOR CHANGE

Introduction

The merging of T-STEM principles and policy onto the ECHS design heightens the pressure to be an exemplary model for schools across Texas. In addition, this goal to provide model programs and impetus for improvement is based on ECHSI. In the T-STEM Blueprint, it is specified that T-STEM academies will act as “demonstration sites to inform math and science teaching and learning statewide” (*Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint*, 27 October, 2009). As a young and ambitious reform effort, early college high schools are also under scrutiny to efficiently and effectively implement the merger of high school and college for underserved and underrepresented students (ECHSI, 2008), students who currently comprise a large segment of the population of the El Paso border community.

As Supovitz and Weinbaum wrote, in today's global environment, "the stakes are enormous for developing and implementing reliable educational reforms" (2008, p. 46). In addition, funding organizations and partner institutions expect TMECHS to fulfill policy objectives and prove credibility (Ricks, 2009, par. 2). TMECHS has set high expectations and has risen to challenges in order to fulfill the expectations of its many constituents. Evidence will show not only that they succeeded in a variety of ways to become a model for others already, but that to do so has required the interaction of multiple levels and members of educational systems in the implementation of programs and processes (Datnow, 2006, p. 107). Several participants commented how TMECHS has already become not only a model in the El Paso community, but across Texas and across the nation as well. Interviewees referred to the school's positive culture and exemplary staff as of paramount importance to the execution of effective, new programs (personal communication, Joyce Ritchey, 19 November, 2009).

There are a variety of different ways that TMECHS has become a model institution. Most evidence supported two of these, TMECHS being an exemplary model for early college high schools across the state and across the nation that are starting up, and TMECHS having individual programs and strategies that can provide guidance for revision and acceleration of programs in area comprehensive high schools.

Sending a Message

When I asked EPCC's president how he would respond to the comment that only a limited number of students will be able to take advantage of early college high schools, even if eventually there is one attached to every El Paso area independent

school district, he said that, "At least we are getting to a large part of the population" (personal communication, EPCC President, 7 December, 2009). In addition, the president said, "what that will do, and we are already being able to see it; that sends a message" (personal communication, 7 December, 2009). This exemplifies how TMECHS and other early college high schools in El Paso satisfy a goal of ECHSI that schools provide a model which influences many more students to "benefit from school designs and structure supports...of the early college high school movement" (Overview & FAQ, 2009, par. 2)

One of the ways a message is sent is in the fact that of the four El Paso high schools that were rated exemplary by TEA in 2009, three of them were early college high schools and the other was a magnet school. What that does the president explained is cause the other high schools to ask themselves what they can do differently "so that our kids don't want to go to that early college high school?" (personal communication, EPCC President, 7 December, 2009). These high schools are asking themselves how they can provide students with similar opportunities as those at the early college high schools. While they cannot offer the completion of an associate's degree, they are trying to devise plans to offer students up to 24 or 30 college credit hours in the traditional high school setting. The president discussed how administrators from an El Paso high school acknowledged to him that they understood that they could not become an Early College High School but still wanted to become as close to one as they possibly could, which would include getting a large number of their students to graduate with 30 college credit hours. The president concluded that "what happens is you put some models out there and the bar is set high for those models" (personal

communication, EPCC President, 7 December, 2009). By ensuring a cross section of students and not filling the school with only A+ students early college high schools are setting their own standard, one that others believe they can achieve or at least come close to.

Model for Change via Individual Programs

Emulating an early college high school means that more students must take more dual credit classes. Early college high schools have an exception from the state for students to take college courses in their freshmen and sophomore years. Under current policy, students cannot do this in traditional high schools (*Texas Administrative Code: Dual Credit Requirements*, 15 August, 2007). EPCC's president discussed the next step, to "question why there is an exception for here and not for here, and these kids, if we can get them to college readiness and they are successful in college courses, why wouldn't you want to offer some of these opportunities in a traditional high school setting?" (personal communication, EPCC President, 7 December, 2009). I asked the president if there could be changes in who can take dual credit in the high schools, as far as moving it earlier, because in the regular high schools now you can only take it in junior and senior years, but with changes in test scores, there may be a lot more students who are eligible. He answered, "I think that is up to us to reassess that; if they are ready, why wouldn't we want to?" and continued that changes might need to be taken to the legislature, to TEA, and to the Higher Education Coordinating Board to change policy, to allow traditional high schools to implement new dual credit programs (personal communication, EPCC President, 7 December, 2009).

With changes in acceptable placement tests, more students in comprehensive high schools will be eligible to take dual credit anyway. That knowledge makes it even more important to review the process by which teachers merge curriculums that do not follow the same sequence or format. Another issue with regard to the increase in dual credit offerings should be addressed as well. With no extra pay for teaching dual credit, teachers may not have enough incentive to go above and beyond, as teachers at an early college high school do. Still, at TMECHS, teachers, some of whom teach all dual credit, receive a regular teacher's salary and are employed by EPCC on a voluntary basis, which is customary for the teaching of dual credit.

This analysis leads to a discussion of an area that is being influenced by the early college high schools in El Paso, ensuring that there are enough teachers in the public schools that are able to teach dual credit. EPCC's president referred to the need to develop different ways to train teachers because a lot of teachers in the public schools may have gotten a master's degree in education but do not have a master's degree or at least 18 hours in a discipline so cannot teach courses at the college level. The independent school districts are already assessing the situation because, he said, "they want more of their teachers to be credentialed" (personal communication, EPCC President, 7 December, 2009). This discussion hinged on the need to be credentialed by the state, meaning that at least 18 graduate hours in a discipline.

Workshops to help prepare students for college placement tests is yet another area in which TMECHS has developed model programs that other schools will be able to pattern their own processes after. When Dr. Jordan discussed the development of college readiness workshops because of the need to prepare eighth graders and high

school freshmen to take placement exams she explained that the well-thought out and well-planned interventions staged at Transmountain were a first district-wide. The stair-stepped interventions during summer bridge programs and throughout the school year to prepare students to take or retake ACCUPLACER were comprehensive because of the need to get the students college ready. If a student had just barely missed the passing score, he or she would be given a different type of instruction than one who had missed by a lot. Lessons were data and student driven and teachers worked together to ensure that each student was receiving personalized attention (personal communication, Terri Jordan, 4 February, 2010).

The model that TMECHS provides can have positive implications for students in area high schools. And as I compared what TMECHS had been implementing with regard to ACCUPLACER preparation, the programming was very similar to what the Texas High School Project's program officer had described as the idea summer academy: testing students before and after interventions, team teaching, a focus on skill development, and a focus on gaps recognized in the students in addition to gaps students typically have at that age (personal communication, THSP Program Officer, 17 November, 2009). With students as young as eighth graders, it was recognized early on at TMECHS that these children had both content and skills gaps.

For EPISD, Dr. Jordan characterized Transmountain as a "testing ground for different kinds of interventions" for ACCUPLACER. She explained that ACCUPLACER interventions were an emerging priority for all El Paso high schools not only to prepare students to take advantage of the opportunity of dual credit, but to ensure that they could be successful upon graduation (personal communication, Terri Jordan, 4

February, 2010). And the support and focus of the college readiness workshops and the manner in which programs were designed carried out reveal once again the collaborative and interactive nature of the implementation of processes at TMECHS, as well as the dedication and expertise of the teaching staff.

The design and focus of the college readiness interventions at TMECHS reveal the mindset of the school's faculty, those who collaboratively designed and led workshops. If a student was not successful in clearing TSI in all areas during summer bridge program, then that student would be provided support and guidance during the school year in workshops and in AVID class. Based on comments by Dean Ritchey, it became apparent that TMECHS views college readiness from a rare, yet appropriate standpoint. "It is not test driven" she said; "it is skill driven" (personal communication, Joyce Ritchey, 19 November, 2009). Dean Ritchey described what needs to be done to ensure students will not only pass placement tests but also be ready to be successful in college coursework as "readiness practice" and explained that implementing true college readiness programs is not that easy in practice because of the environment of the public schools, because of state law; "they are so driven by tests" (personal communication, Joyce Ritchey, 19 November, 2009).

Rigor, College Readiness, and Dual Credit

While placement tests and secondary school requirements such as TAKS are perhaps even more critical for TMECHS, the idea of college readiness as not simply focused on mastering a particular test is pervasive at TMECHS. This, while representative of the school's culture, was more importantly evidence of how rigor and

support are planned for and implemented. By implementing comprehensive teaching strategies and support mechanisms, TMECHS strives to enable “students from a wide range of backgrounds and with diverse prior accomplishments” to succeed and thus show “that the academic challenge provided by college-level courses can be an inspiration, not a barrier” (Overview and FAQ, 2009, The Basics, par. 7). A comprehensive understanding of college readiness by partners, staff, and faculty is evidenced in a conscientious integration of high school and college experiences and expectations for those whom they are likely to be difficult (par. 7).

EPCC’s president admitted that while mechanisms are put in place to provide more assurance that classes will be rigorous, the reality still probably always comes down to the teacher in the classroom (personal communication, EPCC President, 7 December, 2009). He discussed what is done to try to embrace or make a part of the culture that will almost guarantee that that is going to happen” (personal communication, EPCC President, 7 December, 2009). He explained about the credentialing of faculty. TMECHS teachers are not only highly qualified and state certified to teach in the public school, but are also credentialed to teach at the college level with master’s degree in their disciplines. Teachers at TMECHS are not only evaluated by school staff, but by a college faculty or a dean during the year, and in ongoing professional development provided by external coaches from the grant funding agencies. Coupling these monitoring and support processes with the expertise and dedication of teachers provides evidence of compliance and dedication regarding sustained and conscientious involvement from both secondary and postsecondary partners, formally and informally (Overview & FAQ, 2009, The Design, par. 9).

I had a discussion with Dean Smith about rigor being embedded in many different ways. Mr. Smith agreed that rigor looks different on a given day than on another (personal communication, Steve Smith, 7 December, 2009). This idea represents an important aspect of how classes are taught day-to-day at TMECHS. Teachers answer student needs to ensure that they are learning. Some days, they must bring them up to college level and on others, are able to incorporate lessons seamlessly. Teachers endeavor to ensure that all students are engaged, understanding that engagement does not always look the same and requires a mixture of strategies and curricular emphasis. Subsequent research incorporating students and faculty could reveal more about how students can be brought up to college level and the differences between dual credit classes and regular high school classes.

When the TMECHS principal discussed how dual credit was implemented she referred to decisions made by the steering committee regarding the use of the college textbook as the primary textbook with high school materials used to supplement in order to ensure that not only college objectives were met but that high school TEKS would be as well. This type of requirement is logistical and not necessarily influential to the incorporation of rigor into the teaching of the class. However, the principal's comments did attest to her understanding of the role of teachers when she stated, "the key thing that was talked about there was that a lot would be left to the teachers' discretion" as to how to implement course material (personal communication, TMECHS Principal, 9 November, 2009). Still, because of the scrutiny that teachers are under to maintain a rigorous classroom environment in which students are engaged, it is difficult at times to explain to visitors and evaluators that sometimes a teacher must lecture and other

times, because of the difficulty of college texts, teachers must help young students to read and digest the material.

The principal addressed a discussion about whether coursework would be dual credit or AP because of a pervasive mindset that AP incorporates higher standards than dual credit. She elaborated that she does not agree with that mindset and explained that at TMECHS, “we wanted to do what was best for the students and to make sure they were meeting a degree plan” to achieve both a high school diploma and an associate’s degree in four years. Because not all universities take AP credit, “we felt” she said, “that with the dual credit, they do get the credit, they do meet the standards and they can still take the AP exam for the other subjects that they are not taking dual credit for” (personal communication, TMECHS Principal, 9 November, 2009). The program at TMECHS is designed then so that students can maximize their opportunities and planning outcomes reveal again that the model has been adapted to its locale and local objectives.

Some of the courses at TMECHS are being taught for the first time as dual credit within the EPISD. BCIS (Business Communication and Information Systems) and World History are examples of courses that were ensured to be correctly aligned before they were implemented. The principal noted that TMECHS is the only high school offering Introduction to Art as a dual fine arts credit and added that once the alignment was worked out, TMECHS staff ensured that textbooks were purchased for faculty and students. EPCC’s Vice President noted that dual credit “it is pretty easy” for the EPCC when high schools implement processes well. “We just offer our course or we authorize your high school teacher who is credentialed to teach; it doesn’t change; it is still our

course” he said (personal communication, EPCC Vice President, 12 January, 2010). After that, it is again up to the teachers in the classroom to merge curriculums and ensure appropriate rigor and support on a daily basis. As co-construction theory suggests, in my analysis I found that some actors, in this case teachers, could influence one context more than others, even though interconnections among contexts throughout the social system could not be ignored because they provided a complete understanding of the processes involved in implementation (Datnow, 2006, p. 107).

When I asked Nancy Evans, Director of College Readiness for EPISD if freshmen and sophomores taking dual credit at an early college high school was a major operational issue, she replied that it is. She explained the reason freshmen and sophomores are not generally allowed to take dual credit as “that they haven’t matured, haven’t mastered study skills, don’t know how to maneuver” (personal communication, Nancy Evans, 17 November, 2009). She referred to the huge difference between the curriculum in a middle school and in a high school as a jump for students, and said that a jump from middle school to college level is even more difficult because students often do not have “enough background to get that done and they are not confident enough to do that either” (personal communication, Nancy Evans, 17 November, 2009). She elaborated that the primary objective is “not to let students take dual credit and fail”, that dual credit is designed “to help students achieve, get a taste of college, and to get their foot in the door” (personal communication, Nancy Evans, date). She finished by stating that she would not “advocate for a general need to have dual credit for anyone less than a junior; but the early college high school is a whole different setting from the comprehensive high schools, with small learning communities and more individual

attention, which is why it works” (personal communication, 17 November, 2009). Here, supporting the power of co-construction is evidence of a particular context and the collaboration of its actors exerting its influence on the efficacy of a reform initiative and its component programs and processes. Again, however, successful implementation falls squarely on the shoulders of the teachers.

Several participants discussed the accelerated merged aspect of dual credit at TMECHS and the importance of close collaboration with the community college for its success. Dr. Jordan stated that the “hope was that the high school teacher would have that connection through the community college with regard to who they could work with” (personal communication, Terri Jordan, 4 February, 2010). While mechanisms she said are being developed now at the district level to support dual credit, “historically”, she said, “from the district, if it is an early college high school or a regular school, we did not have a lot of support to the dual credit” (personal communication, Terri Jordan, 4 February, 2010). High levels of instruction, engagement, and learning in the dual credit classrooms at TMECHS have come down to teachers and teaching methods. Once again, the merging and presentation of high school TEKS and college course objectives has ultimately been the responsibility of the teachers alone. With teenagers recently out of middle school, every day is a process; teachers must gauge students’ abilities and address them individually and in the group.

Teachers

One participant, a principal from another early college high school who accompanied an interviewee from the Texas High School Project, explained what

teachers must do to make learning happen in dual credit classes at early college high schools: "It is going to be different for each kid" she said, "it is hard work; the hardest work a teacher will ever do; it is not that the teachers get the college going kids and even if they are bright and gifted kids, it is still difficult" (personal communication, Early College High School principal , 17 November, 2009). Co-construction tenants are again evidenced, in this example, in the day-to-day interaction between teachers and students that influence the success of policy in practice.

Even though the students need the teachers to be on every single day, the students need to do their part too and the environment needs to be there as well. The THSP program officer referred to the importance of relationships and proposed that "students don't learn if the relationship is not there" (personal communication, 17 November, 2009). At TMECHS relationships are developed, which is one of the benefits of the early college high school model. Small classes and small cohorts help to create an environment that allows relationships between teachers and students to grow. Dr. Tackett qualified the statement, however, that a teacher has to be "the kind of educator that wants to do that" (personal communication, THSP Program Officer, 17 November, 2009). At TMECHS each teacher was described as that kind of educator.

Several participants noted that the teachers at TMECHS understood that what they were doing in their classrooms was dependent on what other teachers were doing. With high expectations, "they realized they couldn't all have projects due on the same day" (personal communication, THSP Program Officer, 17 November, 2009). They also plan for the scaffolding in of college readiness. The application of study skills are incorporated into daily routines because each teacher realizes that "it's not just about

content and it shouldn't be just about content" (personal communication, THSP Program Officer, 17 November, 2009). Individualize lesson plans are tweaked if they do not work as well as they should. Nancy Evans said that while rigor may originate from the college syllabus and the college textbook, it still "all depends on the instructor" (personal communication, Nancy Evans, 17 November, 2009).

Professional development was discussed by several participants as well as a mechanism to keep rigor uniform and coherent and exemplifies ways in which TMECHS implements programs and processes that can be models for other early college high schools as well as for comprehensive high schools. A Communities Foundation of Texas (CFT) program officer discussed the expectation that "teachers are teaching at the level of rigor and students are learning at the level of rigor" at early college high schools" and explained what the Texas High School Project does to contribute to and support that expectation. She discussed "coaches that are on campuses monitoring, doing observations" and "leadership training for principals...so they know what to look for in a rigorous classroom" (personal communication, CFT Program Officer, 24 November, 2009 date). Professional development is designed as "practitioner in-service", based on emerging practices that educators are implementing in their classes. Emerging, she said, "means that they tried it one way and it didn't work, but then they tried it another way, and guess what, it worked" (personal communication, CFT Program Officer, 24 November, 2009). Teachers are then learning from other teachers. Professional development is also designed to be rolled out year long. Trainings provided throughout the year are conducted by the same people that can then collect data and research to ensure that they are "on target with how they are rolling out the in-

service" (personal communication, CFT Program Officer, 24 November, 2009). Nancy Evans concurred that professional development was very important for the development and support of exemplary teaching at TMECHS, such as helping teachers devise quality assignments and assessments (personal communication, Nancy Evans, 17 November, 2009). From a teacher's standpoint, however, again much professional development in the teaching field is not new, just repackaged and at TMECHS, time is precious and often taken up by trainings and associated requirements that are not helpful, just time consuming.

Dean Smith discussed how EPCC was considering creating a mentoring program for teachers, particularly for the sciences and for teachers who never taught dual credit before. Gail Shipley commented that the deans at Transmountain are very concerned for standards and are very student oriented. She also noted that "Transmountain is very strong in upholding the standards and rigor and those processes are met, provided to the student in a way that the student can succeed, yet they require that the student succeed" (personal communication, Gail Shipley, 18 November, 2009). Involvement among partners, staff, and faculty of EPCC and TMECHS are sustained by way of communication and support. Here as well is an example of conscientious assessment of processes thus far in the conceptualization and development of future support programs, in this case for faculty, which will inevitably influence teaching and learning for students. Hopefully, the program will be thoughtfully conceived and implemented.

Academic Extracurricular Activities

TMECHS activities are largely but not entirely related to the T-STEM aspect of the school. STEM related activities have included thus far Robotics, summer research institutes, and science project competitions. Academically challenging competitions that were not STEM related include participation in the Academic Decathlon, the Citizen Bee (a competition that focuses on government and law in the United States), and University Inter-scholastic League (UIL) competitions. In addition, students partake in community service projects, recycling efforts, student government, drama club, yearbook preparation, and talent shows (*Transmountain Early College High School*). While some of these programs, such as summer research institutes, were designed to fulfill the T-STEM program, others represent the merging of sound components already present in secondary education that offer opportunities for rigor and participation.

The incorporation of these extracurricular activities, such as Academic Decathlon, in TMECHS design, as well as the previous discussions of sound teaching practices and support mechanism, are evidence that partners, staff, and faculty are merging components that are already “healthy in the present system” (Tyack and Cuban, 1995, p. 132-133) into the design of their school. Extracurricular programs coupled with the practices of staff and teachers possible because of experience, expertise, dedication, and support contribute to the development the school’s culture and help to ensure that the students stay engaged.

While teaching and learning is rigorous, each academic program incorporates a level of rigor all its own. Academic extracurricular programs prepare students to move

forward through higher education, in skills development, as well as to help them become eligible for scholarships and to be ready to be successful in upper division coursework. And the idea that these programs help prepare students to keep moving through higher education provides a bridge to the fourth and final theme, TMECHS as an example of a component in a P-20 education model.

THEME FOUR

P-20: TMECHS to UTEP

Introduction

When discussing emergent themes, it is important to address how TMECHS exemplifies a component in a P-20 education model because of the level of collaboration that is evident among professionals at TMECHS, EPISD, EPCC, and UTEP. The goal of a P-20 system is to create a model of education that seamlessly links and coordinates levels of education and guides students not only through a post-secondary associates or bachelor's degree but on to graduate school as well (*ABCs of Investing in Student Performance*, 1996). Ultimately, the education pipeline is meant to be "a single system of education underlying all of the segments" (Institute for Educational Leadership, 1999). Evidence was found of processes being planned and designed to support this idea, not only in interviews with the Provost and Associate Provost from UTEP, but also in those with other administrators at EPCC, EPISD, and TMECHS. The addition of collaborative efforts with UTEP to the partnerships that oversee and help facilitate TMECHS operations helps to instill a college-going culture in the early college high school that encourages students to continue with their education and also enables UTEP to prepare for their arrival.

What is notable about the relationships among EPISD, EPCC, TMECHS, and UTEP is the extent of collaboration and the forethought to plan ahead. Spillane, Reiser, and Gomez (2006) instructed that it is the interactions among actors that define "what is understood from and about policy" (in Honig, 2006, p. 63). In implementation,

administrators and staff are provided with artifacts, experiences, and circumstances to help them understand tasks at hand. UTEP not only offers programs to expose TMECHS students to future possibilities (degrees and careers), its staff and faculty also allow students to experience their campus and academic departments. They prepare for the students by creating orientation programs that are uniquely designed to address these students' needs. They make arrangements for private donor scholarships for students who complete their associates prior to their high school diploma. They have discussions with members of academic and other departments to ensure that the faculty members are ready for the students and that the students will be successful. And they plan for programs to train teachers to teach dual credit in early college high school settings. In essence, UTEP administration and faculty are asking themselves what they can do to support the early college high school initiative in El Paso and are making plans to do so.

UTEP's Provost began our conversation by noting that he had been invited by EPCC's Vice President to work on a steering committee for the early college high schools. The Provost remarked that "there were no mysteries about these schools, and that is very unusual" (personal communication, UTEP Provost, 23 November, 2009). One might ask what does the establishment of early college high schools between public school districts and an area's community college have to do with that area's four year institution. Many would say that the four year institution would declare that the ECHS's graduates would simply learn about their opportunities with the university when they get close to graduation and make the transition to it. But, "from the get go", The Provost noted, "the unusual relationship" already established between EPCC and UTEP

has played out, in involvement from an early stage (personal communication, UTEP Provost, 23 November, 2009).

Anticipating the Transition

There is an enormous interest in early college high schools across the nation and several of UTEP's goals with regard to the students have to do with ensuring that they receive appropriate support once they arrive. One is to make sure they "get all the right support" when they transition from an early college high school to UTEP. Another is educating the students about graduate school opportunities. When students spend two years at UTEP, the second of might be spent applying to graduate schools. For UTEP, prior to the establishment of early college high schools in El Paso, an issue was already how to encourage students to move on to graduate tracks after they transferred credits from EPCC.

UTEP's Provost discussed concerns that have been raised regarding ECHS students once they reach UTEP, but explained that he tended to worry more about whether all faculty members were ready. UTEP faculty members have been asked to keep an open mind about issues such as intellectual maturity and emotional maturity. The mindset fostered at UTEP has been not to "sell these kids short" (personal communication, UTEP Provost, 23 November, 2009). These types of discussions at UTEP exemplify communication, collaboration, and a willingness to adapt, just as has been revealed in the culture of the school and in its partners in previous analysis.

The challenges associated with students who graduate with an associate's degree before they have finished their high school diploma were discussed in interviews

with both UTEP's Provost and Associate Provost Donna Ekal. These challenges had more to do with financial aid than anything else. Because federal policy mandates that high school students do not qualify for regular federal financial aid, exceptions cannot be made for early college high school students. For these students, early ECHS graduates, private donors are sought out to provide scholarships (personal communication, Donna Ekal, 22 January, 2010). While UTEP does not have to do this, it is the right thing to do.

Support

UTEP administration has considered and is developing a variety of ways to support the early college high school initiative in El Paso. Because they offer teacher preparation programs, Deans in the Arts and Sciences began thinking about designing "certificate programs or special preparation for teachers who are going to teach dual credit and in the early college high schools" (personal communication, UTEP Provost, 23 November, 2009). In this discussion, the Provost pointed out that while teaching at an early college high school is hard work, tangible rewards are immediate with regard to a small learning community and supporting students to go on to university degrees. UTEP was planning for ways to "provide support, structure, reward, and recognition [for teachers]...all of those things a university can do because at this point it is a joint endeavor" (personal communication, UTEP Provost, 23 November, 2009).

UTEP recognizes that they have an obligation to help prepare teachers, support them and help them stay engaged, because these teachers are preparing future UTEP students. He described the joint endeavor as participation in "the generation of

university credits", not by suppliers, but by partners. Those partners include teachers and college and university professors, and even though traditionally university professors do not think of public school teachers as partner, they should. When institutions are involved in a partnership, the idea is to get that partnership right (personal communication, UTEP Provost, 23 November, 2009).

Preparation

Dr. Ekal, UTEP's Associate Provost provided specifics about how UTEP was preparing for early college high school graduates. It is done collaboratively, she explained by a team that has "the information and knowledge of how it would interact" (personal communication, Donna Ekal, 22 January 2010). The team she referred to is comprised of staff from the Office of Undergraduate Studies, the Entering Student Program, Enrollment Services, Admissions, and the Academic Advising Center. Dr. Ekal noted that these professionals have anticipated special issues related to students coming in but that it is new territory so issues will be discovered as time goes on.

I asked what makes early college high school transfer students different from other students who have transferred from EPCC. So far, UTEP has only welcomed two cohorts of students from the Mission Early College High School, the school's early graduates, in fall 2009 and spring 2010, for a total of 65. Besides the challenge of finding scholarship donors because these students were early graduates, Dr. Ekal discussed other challenges, such as academic advising and new student orientation (personal communication, Donna Ekal, 22 January, 2010). These challenges were, like those at TMECHS, EPISD, and EPCC, being met head on from a variety of angles.

UTEP's Academic Advising Center (AAC) is designed to be a central point for students when they transfer in with 0 to 60 credit hours. The AAC provides guidance not only with regard to course selection, but with regard to how to navigate the university and seek out supports. Once students decide on a major, they are assigned to the appropriate academic department for advising. But, Dr. Ekal noted, early college high school students come in with 60 credit hours, "so there is not an entry point for us to do new student orientation and course registration" (personal communication, Donna Ekal, 22 January, 2010). Dr. Ekal explained the university's concern as being centered on the idea of turning the students loose to the departments and colleges "when we are still figuring out how to handle them" (personal communication, Donna Ekal, 22 January, 2010). Addressing the issue incorporates what is best for the students and for the departments and colleges. Topics considered have included what information students need to begin successfully at UTEP. As a result of discussions and collaborative decision-making, UTEP currently will have early college high school students go through the Academic Advising Center for their first semester before they transition to an academic department, even though they have already completed 60 college credits when they arrive (personal communication, Donna Ekal, 22 January, 2010).

Regarding new student orientation and so far only based on the two groups from Mission that came in, two different types of orientations were conducted. The first group of students who began in fall 2009 attended a new student orientation. The second group of students who began in spring 2010 attended a transfer orientation. As noted, Dr. Ekal explained that "Both worked partly but neither worked completely" (personal communication, Donna Ekal, 22 January, 2010). A decision has since been made that

with now four and possibly soon six early college high schools in the region, an early college high school orientation will be created. With six early college high schools (100 to 125 per class), UTEP estimates 75% of the approximately 600 graduates will transition to UTEP – that is more than 400 students – so that is enough to warrant an orientation (personal communication, Donna Ekal, 22 January, 2010).

The early college high school orientation will address issues that stem from the average age of the students when they transfer, as well as the fact that they will be taking junior and senior level classes at a younger age (17 or 18 years old) than other transfer students, who are on average 24 or 25 years old. Socialization and university navigation are issues Dr. Ekal explained. The early college high school new student orientation will address accelerated students (those who completed the associates prior to the high school diploma) and those who have graduated from high school (personal communication, Donna Ekal, 22 January, 2010).

Dr. Ekal further discussed that because they are still in a public school as early college high school, they have been in a protected environment and are accustomed to that. Juniors at UTEP are expected to be self-sufficient, which is why Dr. Ekal explained “we feel that there has to be a transition for this population” (personal communication, Donna Ekal, 22 January, 2010). In addition to not taking classes their age peers, because students are coming in as juniors, there is a different expectation by the faculty with regard to maturity and with regard to the caliber of work to be produced. Not only is there is a different social interaction between juniors and seniors, students will not be taking freshmen classes in which faculty expect to help new students navigate the university, and will be stepping into advanced courses such as Calculus 5.

Still, as is the custom at EPCC, faculty members are not expected to change the delivery of their courses (personal communication, Donna Ekal, 22 January, 2010).

And as FERPA issues apply at UTEP just as they did at EPCC, family engagement issues have already been discussed in preparation for early college high school students so that they make a smooth transition to the university environment. Dr. Ekal explained that although the approach to family engagement is different, UTEP has always encouraged families to support the education of their students, "at home, with work schedules, with whatever the family needs...we will encourage that and support it in whatever way we can" (personal communication, Donna Ekal, 22 January, 2010). The difference is like that at EPCC, administrators and faculty members do not talk to parents and guardians, except in rare circumstances. As a result, UTEP is mobilizing resources to be able to educate early college high school parents with regard to "appropriate parent interaction when your student comes to the university" (personal communication, Donna Ekal, 22 January, 2010).

Discussion about the EPCC UTEP Articulation Committee, a long-standing collaborative effort between the two institutions of higher education, which has been instrumental in working out issues of transfer, led to information about UTEP's goal to begin advising early college high school students while still at their respective early college high schools. All associate's degrees at EPCC don't automatically fully articulate to 4-year degree plans at the university, depending on the major. Because of this, UTEP is planning to start advising students before they transfer. If students want to major in nursing, for example, they would need to satisfy pre-nursing requirements and students would need to know about those requirements while still at the early

college high school (personal communication, Donna Ekal, 22 January, 2010). Being proactive in the beginning will allow the institutions to set up informational processes. Dr. Ekal acknowledged that once advisors and teachers at the early college high schools are aware and a culture of knowledge has been created, those processes might not have to be as proactive on UTEP's part (personal communication, 22 January, 2010).

Concluding Remarks

The P-20 model of a seamless education pipeline that takes students through public school and higher education and has a goal of students pursuing graduate degrees is compatible with ECHSI and T-STEM principles. UTEP's involvement with El Paso's early college high schools is evident in programs and processes already in place at TMECHS, even though as of the spring of 2010 its students may not reach UTEP for two more years. Students visit the UTEP campus for workshops and presentations, and compete in science fairs. UTEP and EPCC faculty members collaborate to make presentations and provide guidance for research institutes. Programs are designed to expose students to future possibilities (degrees and careers). These collaborative efforts among partners, staff, and faculty encourage and facilitate alignment between the public school systems, the community college, and higher education, the incorporation of rigor, high expectations, and variety into academics and extracurricular activities, and ultimately a goal of better preparing students for a global, technologically advanced world.

UTEP administration has been proactive in planning for El Paso's early college high school students. They prepare for the students by creating orientation programs that are uniquely designed to address these students' needs. They make arrangements for private donor scholarships for students who complete their associates prior to their high school diploma. They have discussions with members of academic and other departments to ensure that the faculty members are ready for the students and that the students will be successful. And they plan for programs to train teachers to teach dual credit in early college high school settings. In essence, UTEP administration and faculty are asking themselves what they can do to support the early college high school initiative in El Paso and are making plans to do so.

SUMMARY

Research revealed the policies, people and places that shaped the formulation and implementation of policies tied to academics at TMECHS. Data provided the means for robust, grounded explanations of how interaction contributed to the development of processes that would influence the school's environment, program efficacy, and outcomes (Honig, 2006, p. 2). Major and minor issues relative to the merging of high school and college with a T-STEM focus were many and varied, but what this study was able to reveal was how partners, faculty, and staff applied sound practices to address challenges and to support one other in the development and operation of the school.

TMECHS has built a solid institutional culture and because of the co-constructed nature of that culture, partners, staff, and faculty will inevitably continue to work together

as they facilitate existing programs or develop new ones. The theme of the school's culture that expands outward to encompass partners at EPCC, EPISD, grant funding facilitators, and UTEP, was developed and then elaborated on in three additional themes: the merging of ECHSI with T-STEM; TMECHS as a model for change; and TMECHS as a vital component in a P-20 model. These themes emerged as interview data was analyzed and coded and then compared to policy documentation. Although data often supported more than one theme, decisions were made regarding where to place evidence; ultimately this aspect of the research process was in and of itself compelling evidence of the collaborative and interactive framework of TMECHS' design and operation.

Data analysis showed that the campus culture of TMECHS encompasses all of its partners and revealed relationships that have resulted from the blending of activities within a context dependent on its social settings and participants. As TMECHS grows, partners, staff, and faculty will continue to develop and maintain the school's culture as they design and implement processes as a team. And while some actors will inevitably have more influence in some processes, it became evident in analysis that a variety of participants and stakeholders at TMECHS are routinely consulted or taken into account in planning and implementation processes. Co-construction theory guided analysis and showed that influences moved "in multiple directions among active participants in all domains" (Datnow, 2006, p. 107). At TMECHS, interaction and collaboration influence how processes are developed and how they unfold in practice.

Administrator comments about the school culture were overwhelmingly positive. Utilizing data from several participants and researcher knowledge enabled the setting of

activities in context, enhancing an understanding of how they combined to serve the school's vision and mission, which proved to be replete with challenging expectations and requirements. Several discussions illuminated the importance of demographic change as a goal that TMECHS contributes to in El Paso. The goal of providing educational opportunity for students in El Paso's border community is extremely important because the majority of those students are representative of the underserved and underrepresented. Educators tied to TMECHS subscribe to the idea that demographic information can be changed if well-planned and well-executed programs are put in place.

The merging of T-STEM principles and policy stipulations onto the ECHS design was found to be in some ways complementary, in others reinforcing, but in others still responsible for the addition of requirements and components to the schools mission. Some of the stipulations impose limitations, heighten pressures, increase faculty and staff responsibilities, increase student expectations, and add program requirements. Other policies are meant to be supportive components such as professional development and monitoring processes, but which simultaneously add responsibilities and requirements that may not be necessary or helpful. Key areas analyzed included admissions and recruitment and professional development.

Planning, a year-long process prior to the opening of the school in August 2008 was described as mind-boggling because of the attention and consideration that had to be applied in the creation and specification of policies for student enrollment, course selection, degree plans, and family engagement. A steering committee was comprised of several professionals from both EPISD and EPCC. While the planning process was

comprehensive and provided evidence of collaboration of partners, several participants also discussed the manner in which the schools professionals worked together and highlighted camaraderie as significantly contributing to the environment once the school had opened. Thus, teachers are found to be a critical factor for the school's positive, supported, and rigorous academic and social environment because of their expertise and dedication. Qualitative studies in which these teachers could be interviewed would provide further insight into policy and process implementation at TMECHS.

After a discussion of teachers and administrator comments about their skill and dedication, analysis revealed that some of the externally required professional development trainings and programs were excessive and thus ineffective. Administrators noted that teachers were hand-picked for their specifically applicable expertise, but much of the externally provided professional development is not new information, but redundant and repackaged, and required pursuant to funding agency directives. This investigator's critique centered on the idea that strategies taught and practiced are not emergent yet are advertised as such and in addition are required in the manner that the funding agencies dictate. These requirements take time and impose restrictions on the teachers' abilities to run their classrooms. The professional development model that is added to other required trainings by EPISD and EPCC can thus be characterized as another string attached to grant funding that perhaps should be structured differently. For example, many dual credit teachers could benefit from experts providing guidance on the merging of high school curriculum and college objectives and that professional development could then be extended to teachers in the comprehensive high schools.

Admissions and recruitment stipulations and limitations comprised the second key area analyzed with regard to the merging of T-STEM onto ECHSI and represent another string attached to grant funding. While administrators succeeded in designing and facilitating processes that satisfy ECHSI and T-STEM policy and guidelines, the limitations of the T-STEM admissions and recruitment directives with no admissions requirements whatsoever were found to be excessive. Recruitment and selection, although limited by T-STEM criteria, was described as having been designed to mediate its limitations. Processes were designed to disseminate comprehensive information, but evidence showed that students and family members could still be ill-prepared and thus lacking appropriate motivation. Although its design was developed thoughtfully, outcomes, such as attrition, and investigator experience as a teacher, beg research into student motivation as an indicator of success and fit in an early college high school.

Given the context and demographic of El Paso, analysis suggests that the logistics, although sound and well-planned, are not sufficient to ensure an optimal student population that will be able to take advantage of the opportunities presented. With teacher recommendations and an interview prior to submission into the lottery students who would be a good fit for a T-STEM early college high school may be found. These students would no doubt satisfy the target population criteria of both ECHSI and T-STEM. And students who may be better served in a comprehensive high school would wind up there. With the initiatives that EPISD is putting in place in their comprehensive high schools to increase rigor and opportunity, this recommendation is founded on more than just partial evidence.

Administrators discussed how they take steps to ensure that college faculty members understand the student population and also commented that TMECHS teachers go above and beyond to help students succeed. A qualitative study incorporating teacher and student interviews could reveal whether understanding and going above and beyond necessarily equates to students receiving rigorous high school and college curriculums if those students are not willing to put forth the effort needed. Because they are teenagers, one must also question putting them in a situation that they are not suited for and thus not happy in.

Ultimately, while the evidence in this study revealed that planning was collaborative and comprehensive, it would be in implementation studies that incorporate students, faculty, and staff members coupled with outcomes data that could illuminate program and process efficacy, as well as design strengths and flaws. Following a summary of recommendations, implications for future research, many of which are related to the recommendations, include qualitative research to investigate and correlate teacher, staff, and student perspectives on efficacy and process design with quantitative data on outcomes, such as course completions, grades, and perseverance and ultimately with the results of this study. That being said, this study was successful in that it revealed insight into how policies and processes were designed, implemented, and monitored based on static and official requirements and guidelines. Targeting administrators allowed the investigator to discover how policy was translated into process and revealed a sound partnership.

In the final two sections of this paper, recommendations and implications for future research that emerged out of analysis are consolidated, summarized, and

arranged categorically. While recommendations presented themselves based on this study's data, proposed research studies could provide evidence to enhance discussions about policy and process revision.

Recommendations

Several potential recommendations for partners and staff at TMECHS presented themselves; in the next several paragraphs, key recommendations that emerged out of the themes and their associated challenges are consolidated and presented. While challenges were considered and partners attempted to address them conscientiously and comprehensively, this investigator believes that revision and/or development of certain processes would be helpful for the future of the school, and its staff, faculty, and students. These are recommendations for change to current strategies and processes that were originally conceptualized and specified in the planning stages pursuant to grant funding requirements and the interlocal agreement between EPISD and EPCC. Recommendations include amending admissions and recruitment policies, expanding degree options and enhancing associated counseling strategies, adding options for college readiness preparation, and increasing online and distance learning course options. When applicable, constraining policy documentation stipulations and their expirations are noted. The stages in policy formulation and implementation that would need to be revisited are discussed with regard to each recommendation.

Limitations regarding student selection processes are tied to grant funding and associated T-STEM Blueprint stipulations that there be no admissions requirements but that students are eligible to move from 8th to 9th grade. That funding status changes as of May 2010. The third disbursement of grant funds from the Texas High School Project

was in May 2009 and May 2010 is the deadline for the final report. This first recommendation discussed is amending admissions requirements to incorporate faculty references and interviews prior to selection for the lottery.

Reasoning for this recommendation hinges on motivation as a key component in the ability to rise to challenges and persevere. In addition, the majority of El Paso's community is representative of the target population for T-STEM academies and early college high schools. Satisfying the criteria to provide opportunities for traditionally underserved and underrepresented students could easily be done in this community even if the process of recruitment and selection was not totally open. Based on two different lines of reasoning, the high expectations of the program and the limitations of enrollment (so few students are able to take advantage of the opportunity since an early college high school enrolls only up to 500 students in four grades), it seems to this researcher that students should be gauged for motivation and fit prior to the lottery that pares down the applicant pool to the required 125 per cohort. Not only do students need the motivation and perhaps it is unfair to put students in situations they are not suited for, there may be students who were shut out of the opportunity and would have been a better fit.

In order to act on this first recommendation, the planning process would need to be revisited, which would probably mean that members of the original steering committee would need to be reconvened. In discussing evidence to substantiate revision to the admissions and selection processes, members could discuss the number of students who have left the school since its inception and their reasons, the nature of the difficulties that some students have had in clearing TSI, and other indicators of

student motivation. Current TMECHS teachers could be invited to testify at a steering committee meeting as they have been dealing with students on a daily basis and could provide insight.

If discussions lead to agreement that admissions and selection processes should be amended, then processes would again most likely be left to EPISD staff to design and implement. If middle school teacher recommendations are required, associated with this addition would be outreach to middle schools in which teachers are educated with regard to the goals and target population criteria of an early college high school with a STEM focus. This recommendation is proposed with the understanding as well that as time goes by, EPISD middle school personnel will be developing a better understanding of TMECHS and its foundations and mission.

A second recommendation is prompted by concerns that students be given every opportunity to succeed once enrolled. Because the current student selection process does not take into consideration student motivation or teacher recommendations prior to selection, the T-STEM stipulations add challenges for partners, staff, faculty, student, and families once education begins. While evidence has shown that TMECHS has provided guidance and support for students that are primarily encouraged to pursue STEM degrees with diligence and dedication, the complexity of the program at these early stages cannot be denied. In some ways, the STEM focus may have clouded other opportunities available to students to pursue alternate associate degree plans and if that is the case, all students should be made aware that even though TMECHS is a T-STEM Early College High School, there is no stigma attached to choosing to pursue an alternate associates degree that will transfer to a four-year institution.

For a handful of students who may have been better suited at this stage in their lives to pursue other options still, such as associate of applied science degrees, a third recommendation would be to allow students to choose from the variety of options for associate of applied science degrees that the El Paso Community College offers. This recommendation is especially applicable if admissions and selection criteria are not changed. The current interlocal agreement expires in 2013. In this current agreement, the mission is that students graduate in four years with associate transfer degrees or technical degrees. Acting on this recommendation would perhaps entail steering committee members from EPISD and EPCC to reconvene to merge additional degree plans with the Distinguished Achievement Plan for high school graduation that each student must complete.

Implementation this recommendation would also require counseling that not only encourages students to pursue STEM fields, but also is fully aware of all possibilities and can counsel those students who may be better suited for other options. If all students were channeled into degree paths that they were well-suited for, it could ultimately result in losing fewer students to their home schools. While TMECHS exemplifies a component in a P-20 education model because of collaboration among EPISD, EPCC, and UTEP and their shared dedication to the students, an AAS option would not diminish the vision, but might facilitate closer to total success for TMECHS with regard to graduating all students in four years with a high school diploma and an associate's degree; success for all students and for the school and its partners.

While this researcher acknowledges that it is a goal of EPISD, EPCC, and UTEP to encourage all students to continue on in their educations towards bachelors and

graduate degrees, perhaps for some students, this pursuit is not desirable, at least at this time in their lives. Dean Ritchey commented that “for the vast majority of our early college high school students, that is where they are going to go [on to a bachelor’s degree]” (personal communication, date), but she continued, that we should not “shut the door” and tell the handful of students that may not want to that they cannot pursue one of the other options. Even so, because we live in the democratic society that is the United States of America, a handful of students that do not complete an associate of arts or sciences and then continue on to further higher education within a few years could opt to return for additional higher education later in life. And with an AAS degree, these students might be happy as well as contributing members of society. In sum, especially if student selection continues to be based on a lottery with no admissions criteria but eligibility to move into 9th grade, the expansion of options and enhanced counseling could help to ensure that fewer students leave the school.

A third recommendation is also proposed to enhance the school’s ability to meet challenges associated with the limitations of admissions requirements set forth by T-STEM Blueprint. Interviewees were asked whether there was ever any discussion to allow early college high school students to enroll in courses modeled after EPCC developmental courses that are designed to bring students’ skills up to levels that enable them to clear TSI with regard to college placement criteria. As dual credit students, they are not allowed to take developmental classes so this would perhaps be dependent on a process to make a recommendation for an exemption. High school teachers could be provided syllabi and be trained by college instructors in the delivery of the objectives, particularly in areas of reading and writing. Reading placement affects so

many courses that early college high school students can take during their freshmen and sophomore years, everything but writing and mathematics classes, and writing at the college level incorporates much higher expectations than many eighth graders possess because of their level of maturity and lack of experiences. Dr. Jordan had not heard that these discussions had ever been initiated but noted that to be able to make a sound decision in regard to it one would have to go back and look at data to ascertain where and why students were not doing well (personal communication, Terri Jordan, 4 February, 2010). Hence, this recommendation comes with an implication for future research.

The reasoning behind developing semester-long developmental reading and writing courses modeled after those already long established at EPCC, even though these classes would not afford students college credit, is thoughtful and comprehensive. If students who had not been successful in clearing TSI during the summer bridge prior to their freshmen year were put into a focused environment, with curriculum designed to bring their reading comprehension or writing abilities up to college entrance expectation levels, perhaps all could clear by the end of that first semester. While after school and Saturday tutoring sessions, and lessons incorporated into other curriculums, such as AVID and core classes have been successful for many students, TMECHS students have many other responsibilities and challenges, especially during their first year, such as adapting to rigorous coursework and a new environment. Logic goes back to the idea that these students do not need a review, they need to learn and practice skills they have not developed yet.

Again, steering committee members would have to be reconvened to revisit planning processes in order to agree to and then develop a semester-long development reading or writing class modeled after those already established at EPCC. EPISD approval for such a course and associated logistics would have to be accomplished. Teacher qualifications and staffing would need to be planned for as well. Once courses were designed, implementation and oversight would be EPISD's responsibility as courses would be designed specifically for early college high school students and taught by high school credentialed teachers on campus.

The fourth and final set of recommendations offers an avenue to catch students up who may have fallen behind because of not clearing TSI early on and to thus ensure that they stay on track to complete a high school diploma and an associate's degree in four years. These recommendations have to do with offering and expanding online course options and distance learning opportunities for early college high school students. EPCC's Vice President advised that EPCC offers several options already and that these options will only continue to grow (personal communication, EPCC Vice President, 12 January, 2010). If TMECHS students could enroll in online courses they would have more choices with regard to the degree plans they choose, because of the expansion of options with regard to what courses could comprise the 18 hours beyond the 42 core credit hours to earn an associate's degree. Expanding students' options with these types of classes could help a student catch up if he or she had fallen behind in a degree plan because of not clearing TSI early enough on a particular college placement test. On the other hand, a student could accelerate his or her degree plan by taking online courses as well. These courses would not have to fit into class schedules,

which are already complicated enough with the merging of high school curriculum and college requirements. Dean Smith advised that "EPCC is toying with offering STEM courses online" and currently some are already taught as hybrids (personal communication, Steve Smith, 7 December, 2009). Already though, he said, "EPCC has a number of degrees that are completely online with the exception of the science class" (personal communication, Steve Smith, 7 December, 2009). Because of this situation, Mr. Smith said he believes that in the next year or so EPCC will begin to create online science classes. There are difficulties involved in creating online classes in science because of lab requirement, but with new technology, if labs were completed virtually, the problems could be addressed (personal communication, Steve Smith, 7 December, 2009).

Distance learning is different from online courses but could also prove a positive option for early college high school students. While for online courses, students often choose when (within a designated time frame) they log on to access instruction and submit homework and can do this from anywhere they have internet access, distance learning is traditionally offered via video conferencing. Students would have to attend class at designated times in a designated place, but these courses could be offered on Saturdays and in the evenings so as not to disrupt daily course schedules. Again, students could catch up or accelerate their degree plans. An additional recommendation with regard to distance learning comes more from Dean Smith than from me: One of the TMECHS portables could be set up, he suggested, for distance education (personal communication, Steve Smith, 7 December, 2009). And that same portable could incorporate a computer lab as an option for students taking online courses.

To implement the incorporation of online classes would not require revisiting planning processes. Counselors would need to know availability and schedule students into such classes when appropriate. Scheduling logistics would be the issue with regard to distance learning classes as well. Because of the possibility of creating a classroom lab in a portable, this recommendation would require the steering committee to reconvene as well so that partners could discuss technological requirements and decide on finances.

To create and implement the recommendations discussed herein, while planning stages would have to be revisited to redesign policies and processes, partners should probably be revisiting these policies and processes soon in any case to discuss how implementation has been playing out. Steering committee members would need to reconvene and additional input could be sought, from TMECHS teachers and EPCC faculty for example, to provide evidence so that committee members would be able to make informed decisions regarding any changes to current policy and processes. Still, any changes to policy and processes would be revisions, adjustments to current processes with the intent to enhance efficacy and outcomes.

Implications for Future Research

Proposals for research studies are based on discussions during interviews, analysis of interview data and policy documentation, and consideration of stages in policy development and implementation. Interaction among actors and contexts and associated influences and effects were taken into account as future research possibilities were explored. The following proposals suggest ways to gather information

that may lead to enhanced understanding of the design and implementation of processes or may generate ideas for further development of a complex reform initiative and its components. Research implications include conducting student, parent, and teacher interviews, collecting data on student populations, and investigating correlations among TAKS 2200 scores, ACCUPLACER cut scores, and student success.

The first proposal for a research study is meant to provide avenues to gauge student motivation prior to submission into a lottery process. An investigator could conduct student and parent interviews to find out to what extent parents and students truly understood the mission and goals of a T-STEM early college high school. Questions could also address their experiences after students were enrolled. Data collected could be considered if steering committee members were reconvened to revisit admissions and recruitment policies.

A concern that influenced this research proposal would be that given the gift of opportunity that acceptance into a school like an early college high school affords how many parents and students might hesitate but not back out after acceptance. One must think about the target student population and its families. Many, even if challenges and expectations are explained, may not be able to grasp just what it will mean for them with regard to what is ahead and what will be missed out on. This is not to say that motivation cannot be cultivated once a student has been admitted, but given the limitations on how many students can take advantage of TMECHS, one should ask whether motivation and fit should not be gauged to some extent before student names are submitted to the lottery. Teacher interviews could provide information into the experiences of students once enrolled and their levels of motivation. These interviews

could complement the parent and student interviews and could contribute to a case study. Again, this information or teacher testimony could contribute to steering committee discussions about possible policy and process revision.

Qualitative studies in which students, teachers, and parents are interviewed and data is correlated with outcomes research provide the foundation for a second line of research studies. Research could investigate how students are brought up to college level and the differences between dual credit classes and regular high school classes. Questions could address what strategies work in the classroom. Because qualitative research could produce case studies and reveal individual experiences, robust, grounded explanations could provide valuable insight.

Discussions about the character and mix of students at the early college high schools in El Paso prompt a third research proposal. EPCC's Vice President noted that he did not think "any of the districts and EPCC think differently about who these schools are for" (personal communication, EPCC Vice President, 12 January, 2010). When asked if he knew of any studies done thus far to compare populations across schools, he said he did not know of any studies of this sort, but thought the idea interesting. On a related note, if one compared students at TMECHS with students at El Paso's comprehensive high schools, TMECHS may be representative of a well-balanced cross section of all types of students, relative to all types of demographic information. Criteria for a study might be to accumulate qualitative data, such as course attempts and completions, grade point averages, and participation in extracurricular activities. Dr. Jordan admitted that there was "a whole litany" of types of evidence one could gather (personal communication, 4 February, 2010), but cautioned that the term compare was

problematic because it could be construed as trying to make one school appear better than another. Her comment was appreciated; this research possibility does not incorporate an intention to show one school as being better than another. Research and presentation of outcomes should be designed to encourage communication and positive development. And while this research design is conceptualized to provide explanatory evidence only, this researcher agrees with Dr. Jordan that "we still know so little about the outcomes of what we are doing" (personal communication, 4 February, 2010) and that in the future we will want to design studies that follow the students as they transition to institutions of higher education and careers. Studies on four year and graduate degree rates would fall into this category.

A myriad of longitudinal studies could be developed to track students once they graduate from TMECHS and move on. Research criteria could range from grades and GPA, courses and degree plans, whether students went to earn graduate degrees, and how many stayed in El Paso to give back to their own community. Being such a new initiative, following TMECHS' first few cohorts into the future could be a project for years to come. Alumni could be not only tracked for successes and career paths, but surveyed later in life regarding their experiences as charter students in a bold educational reform initiative.

A fifth implication for future research concerns whether there are strong correlations between ACCUPLACER cut scores and TAKS 2200 scores. Because the addition of those scores here in El Paso is so new (as of fall 2009), any correlation has not been yet measured based on student successes. The determination that these scores were correlated was determined by Higher Education Coordinating Board Policy.

Nancy Evans explained how, even though there is a lot of debate and discussion about what is college ready, the State of Texas decided that TAKS cut scores equaled ACCUPLACER as measure "because they believed "the TAKS test is much more difficult than the TAAS" had been (personal communication, Nancy Evans, 17 November, 2009). A research design could begin gathering data immediately based on how students fare in dual credit classes and college classes after having cleared TSI based on TAKS or ACCUPLACER. Historical data on students could be gathered as well to provide a basis for comparison with students who began dual credit or college classes based on ACCUPLACER alone. In a study of this sort, age, demographics, and GPA would be variables that could be factored in to data analysis.

Some of these research project ideas were proposed to provide information for partners as they review the first few years of the school's operation and perhaps rethink policies and processes. Others, such as the longitudinal studies may also provide insight for policy and process revision, but are worthwhile as well as means to document the progress and successes of the first few cohorts of TMECHS.

The aforementioned recommendations and research ideas emerged out of analyses of policy documentation and interview data. Although limited because interviews were conducted with partners and administrators, the intent of the study was to investigate how external policy and guidelines were translated into processes and then how implementation was facilitated. Based on this intent, the study was a success, yet its data prompts subsequent research studies to enhance an understanding of the processes in place and the ramifications of their implementation at TMECHS.

Overall, this study revealed strong collaboration among partners as the investigator researched how policies and processes were designed, facilitated, and monitored based on official requirements and guidelines. Targeting administrators allowed the investigator to investigate how policy was translated into process. Future studies could build on the knowledge gained by allowing educators to gather additional perspectives on process design and efficacy and correlate that data with demographics and outcomes.

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GLOSSARY

ACCUPLACER - ACCUPLACER is a suite of computer-adaptive placement tests created and administered by the CollegeBoard that are meant to quickly, accurately, and efficiently assess reading, writing, and math skills. Because the purpose of ACCUPLACER tests is to provide useful information about a student's academic skills in math, English, and reading, a student does not "pass" or "fail" the placement tests. (ACCUPLACER, 2010)

Advanced Placement (AP) - The Advanced Placement Program, administered by the CollegeBoard and taught at local high schools, allows students to participate in a college level course and possibly earn college credit while still in high school. Secondary schools and colleges cooperate in this program to give students the opportunity to show mastery in college-level courses by taking an AP exam in May of each school year. The main advantage of taking an AP course is better preparation for college. It has been shown that students master in depth content at the college level more easily after completing AP courses in high school. Students also acquire sophisticated academic skills and increased self-confidence in preparation for college (*Texas Education Agency*, 2010).

The Bill & Melinda Gates Foundation states its mission as “increasing the number of low-income youth and adults who earn a college degree or credential with genuine marketplace value” (www.gatesfoundation.org/). The Foundation awards grants through intermediary grantees, public and private partners, nonprofit organizations, and other foundations. Foundation programs are designed to guide students along a

pathway to graduation and a career. Foundation members believe that “despite an increasing number of public and private providers entering the postsecondary education system, there has been very little change in how institutions design their programs and create support systems to meet the needs of their students, many of whom enter college without the necessary skills to perform college-level work” (*The Bill & Melinda Gates Foundation*, 1999-2010).

College Readiness is defined by scores that measure whether students are eligible to enroll in dual credit and college courses. In the 1930s the College Board created the first standardized college entrance test to help colleges and universities identify students with the potential to succeed in college courses. The impetus for the creation of college entrance tests was the perception that there was considerable variation in grading standards and course rigor within and across high schools (Testing, 2010). While this definition is applicable to this study, for the purposes of the research and analysis, college readiness is in some discussions related to how students perform in rigorous classes on daily basis.

Communities Foundation of Texas (CFT) is a non-profit organization with a focus on improving education. State and federal investments are managed by the Texas Education Agency. (*Texas Education Agency*, 2010)

Dual Credit - Dual credit courses are college courses that also count toward high school requirements. These courses may be taken at a high school or at a college and are taught by a high school teacher with appropriate credentials or by regular college faculty. The student earns college credit and high school credit for the course. The high

school and college work together to determine appropriate high school credit to be awarded upon successful completion of the course (*Texas Education Agency, 2010*).

P-20 - Because jobs in today's technological age require more education than a high school diploma represents, communities nationwide are developing programs to improve not only student achievement, but access to and success in higher education as well. Goals often include a seamless system of education. These efforts are designated as K-16, P-16 or P-20 systems (*Texas Education Agency, 2010*). Because of the nature of the early college high school models in El Paso, Texas are administered via collaboration among independent school districts, the El Paso Community College, and the University of Texas at El Paso, TMECHS and the other early college high schools in El Paso are representative of schools within a P-20 model.

The Texas Assessment of Knowledge and Skills (TAKS™) was implemented beginning in spring 2003. The Student Assessment Division manages and oversees the development, administration, scoring and analysis of the statewide assessment program. The statewide assessment program includes the Texas Assessment of Knowledge and Skills (TAKS), including TAKS (Accommodated), TAKS–Modified (TAKS–M), TAKS–Alternate (TAKS–Alt), the Texas English Language Proficiency Assessment System (TELPAS) and End-of-Course (EOC). Texas's statewide student assessment program dates back 25 years. Because of changes to state and federal statute and state-mandated curriculum, currently the Texas Essential Knowledge and Skills (TEKS), the Texas Education Agency has expanded its state assessment program, which has made it more inclusive of and accessible to all student groups. The assessment program is meant to provide a snapshot of the degree to which students

are learning the TEKS whether they are enrolled in general education, special education, or bilingual/English as a Second Language programs. Ultimately, the goal of these assessments is to facilitate students receiving additional help to strengthen their knowledge and skills in core academic areas if they need it, and for districts and campuses to be able to evaluate the effectiveness of their instructional programs (*Texas Education Agency, 2010*).

Texas Education Agency's (TEA) mission is to provide “leadership, guidance and resources to help schools meet the educational needs of all students” (*Texas Education Agency, 2010*) and includes a commissioner of education and agency staff. Public education in Texas is guided and monitored by the TEA and the State Board of Education (SBOE). (*Texas Education Agency, 2010*)

Texas High School Project (THSP) is a public private partnership working to ensure that all Texas students leave high school prepared for college and career. THSP partners include the Office of the Governor, the Texas Education Agency, the Bill & Melinda Gates Foundation, the Michael & Susan Dell Foundation, Wallace Foundation, National Instruments, key legislators, and others. The project invests in students by providing funds and technical assistance to support school districts and individual campuses, building new schools, and creating innovative partnerships between high schools and higher education institutions. THSP's private philanthropic investments are managed by Communities Foundation of Texas. (*Texas High School Project, 2004-2010*)

The Texas Higher Education Coordinating Board (THECB) was created by the Texas Legislature in 1965 to "provide leadership and coordination for the Texas higher education system to achieve excellence for the college education of Texas students." The Coordinating Board meets quarterly in Austin, Texas (*Texas Education Agency*, 2010).

The Texas Success Initiative (TSI) is found under Texas Administrative Code Chapter 4 and requires students to be assessed with regard to reading, writing and math skills prior to enrolling in college. TSI also requires that students be advised based on the results of the assessment. Individual institutions determine what placement tests they will accept and then how students will begin their college or university careers based on their performance on the tests. This flexibility in TSI allows Institutions to determine which paths are best for individual students. The initiative is designed to enable and facilitate processes that will help students become college ready and is also in place to determine whether students may take concurrent or dual credit classes while still in high school (*Texas Higher Education Coordinating Board*, 2010).

APPENDIXES

Appendix A

Communities Foundation of Texas (CFT)/ Texas High School Project (THSP) Grant

Communities Foundation of Texas

The Texas High School Project

**Grant Agreement
Grant #07-D-005407**

Recipient: El Paso Independent School District

Total Grant Amount: \$800,000

Source: The Texas High School Project Fund of Communities Foundation of Texas

Date: July10, 2007

Communities Foundation of Texas

The Texas High School Project

Grant Agreement

Recipient: El Paso Independent School District
Total Amount: up to \$800,000
Grant #: 07-D-005407
Source: The Texas High School Project Fund of Communities Foundation of Texas
Date: July 10, 2007

I. Terms and Provisions of the Grant

- A. The funds provided pursuant to this grant may be used only in accordance with the provisions stated in this agreement. The designated use of granted assets is subject to modification only with prior written approval of Communities Foundation of Texas ("CFT" or "Foundation"). No grant provided by the Foundation may be used for any political campaign or to support attempts to influence legislation by any governmental body. Grant funds may be used to publish the results of non-partisan analysis, study, or research. No charitable grant provided by the Foundation may directly benefit or pay a personal pledge or obligation of the donor who created the source fund, the donor's family, a CFT trustee, a CFT employee, or an advisor for the fund. EL PASO INDEPENDENT SCHOOL DISTRICT (the "Recipient" or "Recipient Organization") represents and affirms that funds granted subject to the terms and conditions of this grant agreement shall not create any personal benefit for the donor, the donor's family, a CFT trustee, a CFT employee, or an advisor for the source fund. Recipient also represents and affirms that the granted funds are not in payment of any legally binding pledge, written or verbal commitment or obligation of any individual or entity other than Communities Foundation of Texas.
- B. The Recipient of funds granted under the terms and conditions of this grant agreement, following appropriate internal review and accounting procedures, agrees to apply best efforts to receive, process, and use granted funds (as described in Section II), in a timely way, without unreasonable delay, and in a facilitative manner.
- C. No portion of awarded funds may be "taxed" by the Recipient to fund Recipient's operations at an institutional, local, state or national level without prior written approval of the Foundation. Unless specifically authorized in writing by the Foundation, granted funds may not be directed, appropriated, assigned or shared to fund Recipient's institutional developmental overhead costs, direct or indirect costs, and general overhead or administrative operations costs, other than those identified in the Foundation approved budget for this project. All granted funds must be used by Recipient for the designated Texas High School Project ("THSP") grant purpose stated in Section II of this agreement. Should any granted funds be used to sponsor or fund independent or individual research, investigation, discovery or invention, Recipient named in this grant agreement or Communities Foundation of Texas must be assigned and legally possess all intellectual property rights to the direct results of such funded activity or project. Granted funds may not be used to provide private inurement to fund direct or indirect for-profit ventures, organizations or projects. Recipient is responsible for the legal use of granted assets as designated and for maintaining accurate financial records consistent with generally accepted government accounting practices.
- D. Recipient will furnish THSP and the Foundation with written evaluation reports in the form and format required by THSP and the Foundation, its donors and major funding partners on at least an annual basis, or as requested in writing by THSP and the Foundation, its donors and major funding partners, and at the conclusion of the project or program supported by the grant. These reports must include a complete financial statement, quantitative information regarding the progress of the program goals to date, and a detailed narrative describing the progress of the program for which the grant has been made. These reports shall supply sufficient information for THSP and the Foundation to determine that the grant has been or is being used for the purpose intended (as described in Section II below), to monitor the progress of the programs funded, and for it to fulfill its public reporting responsibilities. Recipient agrees to maintain adequate records to enable proper expenditure of the grant funds to be easily confirmed. Recipient agrees to make its books and records available for inspection at a time and location mutually agreeable to Recipient and the Foundation and permit the Foundation or its designated representatives to monitor

Communities Foundation of Texas

The Texas High School Project

Grant Agreement

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Date: July 10, 2007

and conduct an evaluation of operations under this grant at a time and location mutually agreeable to Recipient and the Foundation, which may include visits by the Foundation or THSP staff or other designated representatives or contractors to observe Recipient's program, discussions of the program with staff, and reviews of financial and other records connected with this grant.

- E. If the Foundation is not satisfied with the progress of the project for which Recipient has received granted funds under this grant agreement or the content of any written report from Recipient regarding the project, the Foundation reserves the right at its discretion to require that the report be rewritten and/or cancel the grant and discontinue funding the project and/or request that Recipient return any unspent and uncommitted grant funds previously distributed to Recipient by the Foundation. Without limiting the foregoing, the Foundation reserves the right to withhold funds or terminate this grant agreement if significant organizational or project leadership changes occur that the Foundation believes may compromise the project or adversely impact its viability or ability to function as intended and described in Section II below. Notwithstanding any other provision of this grant agreement, in the event that this grant agreement is terminated for the reasons set forth in the foregoing sentence, no amount of any unpaid grant funds will be paid to Recipient.
- F. Recipient agrees to collaborate with THSP and the Foundation by implementing a framework for program evaluation to gather essential information and data, and to conduct an independent assessment of its progress. As part of the evaluation process, Recipient agrees to:
1. Appoint an evaluation coordinator who has overall responsibility for coordinating and conducting evaluation activities for the grant in cooperation with the Foundation's evaluation contractor or program officer, and in accordance with the evaluation framework provided by the Foundation;
 2. Appoint an on-site evaluation coordinator for each campus who will be responsible for oversight, evaluation and coordination activities on the funded project;
 3. Allow, coordinate and facilitate the collection of data by the Foundation or its evaluation contractor;
 4. Allow the dissemination of evaluation and research findings;
 5. Allow the Foundation or its evaluation contractor to implement a plan for analysis of student work, including professors' assignments. The Foundation acknowledges Recipient's obligations to abide by all FERPA requirements and any district/university requirements with regard to individual student and teacher identification. Recipient agrees, with appropriate protections and assurances to its students and teachers from the contractor, to provide samples of student work and teacher assignments, as requested by the contractor.
- G. In crediting the grant for annual and final reporting purposes, credit must be given to the Trustees of Communities Foundation of Texas for their awarding of this grant. All public announcement, credit and report of this grant must list the source of the grant as:
- "Texas High School Project Fund of Communities Foundation of Texas"
- II. Recipient agrees to permit the Foundation and/or its representatives and/or its major funding partners to include information on this grant in its/their periodic reports and to permit reference to this grant in press releases. Foundation agrees to provide the Recipient with reasonable advance notice of any public press announcement

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related to the project requiring the attendance of any El Paso Independent School District officials. Following guidelines established by THSP concerning public announcement, communications and marketing, Recipient will use best efforts to publicize and promote public knowledge of the grant, unless otherwise agreed to in writing by the Foundation. Recipient agrees to employ any written credit line and/or any Foundation supplied camera-ready art in the design, format, specification and size determined to be appropriate by the Foundation in all printed announcements, press releases, publications and media briefing materials or announcements related to the project funded by the grant provided there is no conflict with El Paso Independent School District media requirements and guidelines. Public announcement of this grant and the program funded must first be reviewed and approved by the Foundation. Copies of news releases and other published materials, pictures etc., which may be developed in connection with this grant, will be provided to the Foundation. Recipient agrees to consult with THSP and the Vice President of External Affairs for the Communities Foundation of Texas in order to develop an appropriate naming opportunity, credit and acknowledgement strategy and methods and forms of public recognition that are acceptable to the Foundation and are suitable for a grant of this magnitude and timeliness.

- I. Written acknowledgement of the Foundation's support in programs or other materials must include the full name of the Foundation as stated in G. above. Recipient agrees to permit the Foundation, at the Foundation's option and expense, to change, replace or modify any plaques, signs or other forms of public acknowledgement of the grant made by the recipient, should at any time in the future, a change in the name of the Foundation or the granting fund warrant such a change in the interest of clarity, proper credit and historical accuracy.
- J. To the extent not prohibited by the constitution and laws of the State of Texas, Recipient shall indemnify the Foundation and hold the Foundation harmless from and against any liability, loss damage, suit claim, action or proceeding suffered or incurred by the Foundation, its officers, directors, trustees, partners, employees or agents as the result of Recipient's failure to observe, perform or discharge Recipient's duties hereunder, or in any matter arising out of the making of this grant by the Foundation, excluding in any event any of the foregoing resulting from the Foundation's gross negligence or willful misconduct. The obligation of Recipient under this Section J, to the extent valid, legal, and enforceable, shall survive the termination of this grant agreement. The foregoing indemnification, to the extent valid, legal, and enforceable, shall apply whether or not such indemnified claims are in any way or to any extent owed, in whole or in part, under any claim or theory of strict liability, or are caused, in whole or in part, by any negligent act or omission of the Foundation.
- K. IF RECIPIENT FAILS TO COMPLY WITH ANY OF THE CONDITIONS OF THIS AWARD WITHOUT OBTAINING PRIOR WRITTEN APPROVAL FROM THE FOUNDATION, THE FOUNDATION RESERVES THE RIGHT TO CANCEL OR MODIFY THE GRANT AND ASK THAT THE GRANTED ASSETS BE RETURNED. THE FOUNDATION RESERVES THE RIGHT TO ALTER IN ITS SOLE DISCRETION THE PAY OUT SCHEDULE ON THIS GRANT UPON WRITTEN NOTICE TO RECIPIENT.

Communities Foundation of Texas

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Date: July 10, 2007

II. DESIGNATION/OTHER CONDITIONS OF THE GRANT

A. Based upon Recipient's grant proposal submitted to the Texas High School Project on March 15, 2007, the El Paso Independent School District is awarded funds designated to be used by Recipient to fund the activities of the design and implementation of a Texas Science, Technology, Engineering and Mathematics (T-STEM) Early College High School (ECHS). Recipient assures the Foundation that its administration of granted funds and the objectives of the programs thereby supported shall in all ways be consistent with the goals and objectives of the Texas High School Project, and its major foundation funding partners, the Bill & Melinda Gates Foundation, the Michael & Susan Dell Foundation and Communities Foundation of Texas.

B. Recipient agrees to:

Serve 100 students in each grade level for grades 9 through 12 on the Transmountain (El Paso Community College System) college campus. The proposed 9-12 school will align with the goal of the T-STEM Initiative to support the creation of innovative small high schools with integrated, applied math and science teaching and learning and to provide mathematics and science demonstration sites to improve math and science performance statewide and align with the mission of the ECHS Initiative in making higher education more accessible, affordable, and attractive by bridging the divide between high school and college; providing needed guidance and support from adults through the first two years of college; facilitating the transition of motivated students to higher education; and demonstrating new ways of integrating levels of schooling to better serve the intellectual and developmental needs of young people.

Develop an Implementation Proposal outlining the design and implementation of a T-STEM ECHS. Deliverables include:

1. Design Narrative focused on the T-STEM Blueprint and ECHS design principles
2. Three year grant budget
3. First year operational budget
4. Five year "all funding streams" budget demonstrating sustainability at the close of the grant period
5. Five year span staffing plans
6. Five year span for curriculum and course roll out
7. Signed Memorandum of Understanding (MOU) with all Institutes of Higher Education (IHE) and business partners
8. Schedule detailing the plan for acquiring up to 60 college credits

In the development of the implementation plan, Recipient will be expected to submit quantitative targets for various evaluative measures including enrollment, dual enrollment, attrition, attendance, graduation, and college matriculation. Assessment tools will include:

- student recruitment and attrition rates
- standardized test scores (disaggregated as well as compressed)
- individual student portfolios, AP scores, dual credit grades, course completions
- student, parent, and staff surveys of satisfaction

Communities Foundation of Texas

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Date: July 10, 2007

- review of services provided to train staff – and results based on product (major student projects, curriculum development, student TAKS scores, etc.)
- evidence of MOU's with IHE in place and successfully implemented
- collaboratives and partnerships secured for STEM projects, internships, career awareness
- course sequences established and modified
- individual student plans for graduation that include high school, associate's degree, bachelor's degree
- student assessments in place to appropriately serve each student where he/she is functioning
- college counseling plan in place
- college acceptance rate – college acceptance postings per student
- tracking / evaluating students: STEM coursework completion, college course completions, internship completions, Senior Project completions and college scholarship awards

C. Anticipated outcomes for the grant award to El Paso Independent School District

- Memorandum of Understanding with IHE will formally institutionalize the program detailing the maximum 60 hours of college credit that may lead to or result in an associate's degree.
- "Recognized" or above standings for the high school based on TAKS scores and or end-of-course exams as mandated by the legislature
- Documented college credit completion by year
- Curriculum and course sequence clearly defined and modified for effectiveness
- Successful T-STEM project completions and web postings
- 100% students have completed internships by graduation
- 95% college acceptance for graduating seniors or 100% job acquisition for those students who have attained a terminal associate's degree
- Budget template for successful implementation of T-STEM ECHS program
- Staffing roster with job descriptions for successful implementation of T STEM ECHS program

D. Provided all terms and conditions of this grant agreement are met in the sole judgment of the Foundation and THSP, payment shall be made by the Foundation to Recipient on an annual basis during the payout term of the grant. Recipient acknowledges and agrees to fund the Program as designated and in the amounts and according to the following payout schedule as funds are made available to it by the Foundation:

Recipient	Upon Signature Pre Implementation Funds	October 1, 2007 Implementation Funds	May 1, 2008	May 1, 2009	Total
El Paso Independent School District	\$130,000	\$200,000	\$270,000	\$200,000	800,000

The Pre-Implementation funding in the amount of \$130,000 will be paid to Recipient upon signature of both parties to this Grant Agreement. The Foundation will require 15 days to review the implementation proposal. Upon the approval of the implementation proposal, subsequent payments for implementation will be made to

Communities Foundation of Texas

The Texas High School Project

Grant Agreement

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Recipient on October 1, 2007, May 1, 2008, and May 1, 2009, provided all terms and conditions of this grant agreement are met by Recipient.

- E. Recipient acknowledges, understands and accepts that funds granted under this grant agreement may not be used to support capital costs, permanent staff positions (paid from grant funds beyond the funding period), any activities than can be construed as lobbying, and/or any activities that include payment to an elected official (e.g., conference participation, meals, travel, etc.).
- F. Future payment of funds awarded under the terms and conditions of this grant agreement in support of El Paso Independent School District is contingent upon Recipient's maintenance of its status as an organization exempt from federal income tax under Sections 501 (c)(3) or 170(b), as applicable, of the Internal Revenue Code. In addition to terms listed in Section 1 (above), payment of any funds granted under the terms of this agreement may be suspended or cancelled by Grantor at its sole discretion should any of the following occur: 1) dissolution of Recipient, 2) termination of Recipient's exempt status.
- G. Written annual reports must be submitted to THSP and the Foundation annually on May 30, 2008 and May 29, 2009. The final report is due on May 31, 2010. All reports shall include but are not limited to the following information:
 - 1. Narrative update detailing grant activities
 - 2. Budget-to-Actual Report detailing the use of grant funds
 - 3. Formative and summative assessments as follows:

Measure	Formative	Summative	Purpose
Attendance	X	X	Student engagement & motivation
Portfolios, projects, exhibitions	X	X	Authentic assessment to define / STEM; effectiveness of staff; student success
Performance Exhibitions	X	X	Document a model of "graduation portfolio" – to document student's growth, development, and achievement
Graduation Rates		X	Program success for students using these higher standards and increased credits
College Admissions		X	Review success of program
Internship completions	X	X	Review/revise effectiveness of collaborations and student preparedness
Pre/Post standardized test measures: TBA	X	X	Review programs for individual students as well as school-wide success; facilitates modification to increase effectiveness on both levels

- H. Interim written reports will be submitted on September 3, 2007 (Implementation Plan), January 4, 2008, August 4, 2008, December 1, 2008, March 2, 2009, October 1, 2009 and February 1, 2010.

Communities Foundation of Texas

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Date: July 10, 2007

- I. In addition to evaluation and accountability requirements detailed in Section I above, Recipient agrees to monitor, support and track program performance against expected program outcomes and to monitor and/or audit the appropriate use of granted funds. Recipient, working with the staff of THSP and its outside professional advisors, agrees to assist in the implementation of a detailed program to collect data needed to evaluate Program performance in meeting the THSP goals and to participate fully in a range of data collection and evaluation activities that will be required by THSP.
- J. Recipient acknowledges that the Foundation makes no assurances of and is in no way obligated to provide additional, future or supplementary funding to support the continuation of the programs created, enhanced or transformed by this grant. Recipient agrees to work with and assist THSP, its participating institutions, its funding partners and constituents, to identify and cultivate other funding sources in order to ensure the long-term sustainability of the THSP.
- K. An annual site visit at a date and time mutually agreeable with Recipient and the Foundation will be conducted by the THSP Program Officer to assess progress on the stated goals of the project. Site visit and meeting attendance by THSP staff will discontinue at the termination of the grant agreement or in the event that THSP funding is discontinued by its major funding partner, the Bill & Melinda Gates Foundation.

III. NOTICE

The terms of this grant agreement shall be governed by Texas law applicable to agreements made and to be performed in Texas. The terms of this grant agreement may be amended only by a written instrument signed by Recipient and the Foundation. Use of CFT granted funds must be appropriate under the terms and provisions of this agreement and Sections 501 (c) (3) or 170(b), as applicable, of the Internal Revenue Code and conform to all state and federal laws. Permission to alter the designated purpose or use of these granted funds must be obtained in writing from Communities Foundation of Texas. This is a one-time grant and the Foundation's entire and total grant commitment under this grant agreement shall not be more than the sum of \$800,000. Payment of this grant is subject to the availability of funds in the Texas High School Project Fund of the Communities Foundation of Texas as provided by its major funding partner, the Bill & Melinda Gates Foundation.

Communities Foundation of Texas
The Texas High School Project
Grant Agreement

Recipient: El Paso Independent School District
Total Amount: up to \$800,000
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Source: The Texas High School Project Fund of Communities Foundation of Texas
Date: July 10, 2007

IV. RECIPIENT'S ACCEPTANCE

For: EL PASO INDEPENDENT SCHOOL DISTRICT

By**:

8/21/07

(Signature)

Date

Dr. Lorenzo Garcia

(Print Name)

Superintendent

(Title)

Important Note:

****This grant agreement must be signed by the Chairman of the Governing Body [Board of Directors/Trustees] of the Recipient Organization or by the primary Executive Officer of the Recipient Organization who is specifically empowered by the governing body to make legally binding agreements on its behalf. In the latter case, a corporate resolution of that authority must be attached to the returned contract.**

V. FOUNDATION'S ACCEPTANCE

The foregoing is agreed to this 10th day of September, 2007.

For: COMMUNITIES FOUNDATION OF TEXAS

By:

Jeverley R. Cook, Jr.
Vice President, Grants

For: TEXAS HIGH SCHOOL PROJECT

By:

Todd Foster
Director of Finance and Administration

Communities Foundation of Texas

The Texas High School Project

Grant Agreement

Recipient: El Paso Independent School District
Total Amount: up to \$800,000
Grant #: 07-D-005407
Source: The Texas High School Project Fund of Communities Foundation of Texas
Date: July 10, 2007

VI. (Grant Summary For Information Only)

Recipient: El Paso Independent School District
Total Amount: up to \$800,000
Grant #: 07-D-005407
Source: The Texas High School Project Fund of Communities Foundation of Texas
Date: May 10, 2007
Recommended by: THSP Steering Committee
Pay out schedule: Annually over 2 years, beginning upon signature of both parties to this agreement and ending on May 1, 2009. The foundation reserves the right to alter in its sole discretion the pay out schedule on this grant upon two weeks written notice to the Recipient.

Program

Contact Person: Terri Jordan
Title: Assistant Superintendent for College Readiness
Address: 6531 Boeing Drive
El Paso, TX 79925
Phone: 915-881-2315
Email: ljordan@episd.org

Contact Person: Robert Ortega
Title: Assistant Superintendent for Secondary Schools
Address: 6531 Boeing Drive
El Paso, TX 79925
Phone: 915-887-6408
Email: rortega@episd.org

Grant Administration

Contact Person: Karen Taylor
Title: Grants Compliance
Address: 6531 Boeing Drive
El Paso, TX 79925
Phone: 915-881-2344
Email: ketaylor@episd.org

Other: All reports due as described in Section II above.

Appendix B
Texas Science, Technology, Engineering and Mathematics
Academies Design Blueprint



Texas Science, Technology, Engineering and Mathematics Academies Design Blueprint

The T-STEM Academies Blueprint was written at THSP over two years ago. Before being used as a basis for T-STEM Academy design, it was vetted by national experts in the fields of school and curriculum restructuring. Since that time it has been used successfully by the T-STEM Academies opening in 2006-07 and 2007-08. The T-STEM staff has received considerable feedback from those Academies and from the T-STEM Center personnel over the past year and a half. In response to that feedback, we are now in the process of redesigning the Blueprint for added clarity and ease of use. The new document will be ready for distribution very soon.

Texas Science, Technology, Engineering and Mathematics (T-STEM) Initiative Background

Texas Science, Technology, Engineering and Mathematics (T-STEM) is a \$71 million initiative designed to improve instruction and academic performance in science and math related subjects at high schools across Texas. The project aims to closely align the high school curriculum with the admission requirements of competitive colleges and the qualifications needed to succeed at today's high-paying jobs. T-STEM was developed by the Texas High School Project (THSP), a public private partnership working to ensure that all Texas students leave high school prepared for college and career.

THSP partners include the Office of the Governor, the Texas Education Agency, the Bill & Melinda Gates Foundation, the Michael & Susan Dell Foundation, Wallace Foundation, National Instruments, key legislators, and others. The project invests in students by providing funds and technical assistance to support school districts and individual campuses, building new schools, and creating innovative partnerships between high schools and higher education institutions. THSP's private philanthropic investments are managed by Communities Foundation of Texas, a non-profit organization with a focus on improving education. State and federal investments are managed by the Texas Education Agency.

Purpose

The purpose of the Texas Science, Technology, Engineering and Math (T-STEM) Academies is to increase student achievement by engaging and exposing students to innovative science and math instruction while simultaneously acting as demonstration sites to inform math and science teaching and learning statewide.

The T-STEM Initiative promotes education strategies that integrate the teaching of STEM in a way that challenges students to innovate and invent. T-STEM coursework requires students to demonstrate their understanding of these disciplines in an environment that models real world contexts for learning and work. Students participating in T-STEM education graduate prepared to pursue postsecondary level coursework and careers in science, technology, engineering, and math.



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T-STEM Academies Benchmarks, Program Requirements, and Indicators

Each T-STEM Academy will develop an individualized academy implementation plan based on the design blueprint detailing progress on the following best practices benchmarks, program requirements and indicators of progress. The Design Blueprint Progress Tool will be used by the TEA and CFT T-STEM staff to evaluate the progress of each T-STEM academy during the planning and implementation years.

BENCHMARK 1: Mission Driven Leadership

Program Requirement 1.1: Academy design blueprint and implementation plan

- a. The Academy uses the academy design blueprint as a guidepost to develop an implementation plan for building a school infrastructure and act on the work of the Academy.
- b. The implementation plan reflects high and consistent learning expectations and performance standards for all students as measured by internal and external measurement tools.
- c. The Academy is clear about the specific skills that must be addressed that are essential to STEM literacy skills, i.e., the types of skills necessary to meet demands of advanced high school coursework, higher education, the world of work, and lifelong learning.
- d. The implementation plan reflects a consensus among staff and key stakeholders on how the Academy helps diverse learners build the requisite skills and strategies to become highly functioning STEM-literate graduates.
- e. Partner agreements have been developed with institutions of higher education, businesses, and other community groups to support the design blueprint implementation plan.

Program Requirement 1.2: Leadership

- a. The Academy has in place a clear organizational structure (e.g. a flow chart) for leadership and governance, demonstrating accountability and collaboration for continuous improvement.
- b. The leadership and governance structure of the Academy plans for the participation and leadership of the following stakeholders: students, teachers, grant design team, parent-community, business, community partners and institutions of higher education partners i.e. higher education partner(s) who will assist in the delivery of coursework that will result in college credit).
- c. The decision-making structure is clear and understood by all stakeholders.
- d. Expectations for teachers' additional responsibilities outside their classroom duties are delineated and have been agreed upon by all teachers.
- e. The Academy designs a report to stakeholders that includes data on student performance, attendance, persistence, and annual pre- and post-surveys of stakeholders' satisfaction.



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Program Requirement 1.3: Student Achievement

- a. Data-driven decision-making is integrated into the daily work of the Academy.
- b. There is a clear process for program review and evaluation that is measured against a continuum of development to determine what is and is not effective for improving teaching and learning.
- c. Feedback mechanisms are created and in place to monitor all structural and managerial innovations.
- d. The Academy participates in an ongoing formative evaluation process for the purpose of monitoring the implementation and the effectiveness of improvement strategies. This may include evaluative site visits by individuals outside of the organization.
- e. The Academy leadership participates with the T-STEM Center in their geographic area to support the transformation of teaching methods, teacher preparation, and instruction in the science, technology, engineering, and math fields.
- f. Academy leadership participates in the T-STEM Academy Leadership Coaching program. Leadership Coaches provide ongoing support to the academies for continuous development and the achievement of long-term T-STEM goals through site visits, e-contacts, and phone contacts.
- g. The Academy participates in the T-STEM Network, a statewide best practices network for science, technology, engineering, and math education to promote broad dissemination and adoption of promising practices from the initiative and to improve math and science performance for students across Texas.

BENCHMARK 2: School Culture and Design

Program Requirement 2.1: Personalization

- a. The Academy details the plan for remaining small—approximately 100 students per grade.
- b. Class sizes allow for small collaborative learning communities among students.
- c. The Academy provides a design and implementation plan for an advisory period, a time during the school day that is non-graded and focuses on personalizing the student experience, building relationships with students and parents, and character-development.
- d. The Academy develops a process for hearing and responding to student voice.
- e. The school day is flexibly scheduled with blocks of time that support student learning.
- f. The Academy celebrates high quality student work through student exhibits both on-site and/or then in Texas forums.
- g. The Academy provides the plan for ensuring that every student has and uses an individual graduation plan that includes planning for post-secondary education.

Program Requirement 2.2: Culture

- a. The Academy community (i.e. school leaders, students, parents and school community) develops a handbook with clear procedures, discipline policies and consequences to distribute and discuss with students, staff, and families.



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- b. The Academy involves all stakeholders in developing a culture of respect and responsibility that involves older students as peer mentors for entering students.
- c. The Academy fosters the development of positive student identities through a responsive classroom atmosphere of respect, trust, and meaningful adult and peer relationships.
- d. All students have the opportunity to assume roles responsibility within the Academy and the classroom.
- e. All students have access and opportunities to engage in school activities.
- f. Discipline referrals and records indicate a safe and orderly school.
- g. Attendance records reflect consistent student attendance and participation in school.

Program Requirement 2.3: Postsecondary success

- a. Students participating in T-STEM education will graduate prepared to pursue postsecondary level coursework and careers in science, technology, engineering, and math.
- b. The Academy includes grades 6-12 or actively works with feeder middle schools to develop interest in STEM education.
- c. The Academy develops a plan for student success on college entrance exams.
- d. The Academy provides high-quality, college-preparatory tools for students and families.
- a. The Academy creates university or college partnerships for mentoring, fostering a college-going culture, and the provision of college level courses/dual credit, teacher training, etc.
- b. The Academy designs and provides student support in meeting the requirement that all students graduate with 12 to 30 college credits through multiple educational pathways such as dual credit, International Baccalaureate (IB) concurrent enrollment, articulated credit and/or Advanced Placement (AP).
- c. Students have access to college credits that map to the economic workforce clusters: semiconductor industry, information and computer technology, microelectromechanical systems, manufactured energy systems, nanotechnology, and/or biotechnology, etc.

BENCHMARK 3: Student Outreach/Recruitment, Selection and Retention

Program Requirement 3.1: Recruitment

- a. The Academy develops a process for marketing to and recruitment from appropriate communities and feeder schools to reach high need and under represented students.
- b. Necessary support structures are in place to allow participation by high need and under represented students and families, such as transportation or plans for transportation to the school, child care for family events, and translation of all recruitment and marketing materials.



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Program Requirement 3.2: Open access

- a. The Academy develops a lottery-based selection process that is based on serving populations of high-need and under represented students. Application for the lottery does not include onerous requirements that might deter all but the most motivated students.
- b. The Academy student population must consist of greater than 50% economically disadvantaged students or a majority minority population
- c. Application does not include requirements for grades, TAKS scores, requirements, discipline history, or teacher recommendation.

Program Requirement 3.3: Student Retention

- a. The Academy develops a strategy to encourage persistence, e.g., parent/family outreach, early intervention strategies, mentoring, tutoring, counseling, and other supports for academic and socio-emotional growth.
- b. The Academy develops a process to provide on-staff content coaches to be available and accessible to support both teachers and students.
- c. Programs exist that are focused on quality student engagement.

BENCHMARK 4: Teacher-Leader Selection, Development and Retention

Program Requirement 4.1: Highly qualified teachers

- a. Academy leader, teachers and key stakeholders recruit highly qualified secondary and postsecondary faculty who possess extensive subject knowledge and who have demonstrated success working with high-need students.
- b. Innovative programs are designed or employed to hire qualified STEM teachers.
- c. Teacher job descriptions and requirements demonstrate success with high-need students.

Program Requirement 4.2: Professional development

- a. The professional development model is prioritized by need (e.g. areas for improvement), informed and evaluated by instruction, assessment, and data.
- b. The Academy-based professional development model is structured to provide ongoing opportunities for continuous learning opportunities for teachers and administrators such as research-based practice, content competence, new instructional strategies, job-embedded coaching and/or mentoring support, practice-focused reflective inquiry, and student work-based data analysis.
- c. The Academy in collaboration with Centers and other academies develop a plan for sustained professional development based on student and teacher needs.
- d. On-staff content coaches are available and accessible to support both teachers and students.



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Program Requirement 4.3: Teacher retention

- a. The Academy provides teachers autonomy over their own classrooms.
- b. Academy teachers' schedules are designed to provide a common planning time for teachers and to support results-driven, team-focused professional learning and collaboration.
- c. The Academy has a plan for new teacher orientation, induction, mentoring professional development and administrative support.
- d. The Academy plans for ongoing professional development to improve teacher content knowledge, instructional skills, and the use of technological tools, including opportunities for STEM-related externships.
- e. The Academy provides incentives for teachers' continued intellectual and practiced-based investments in the T-STEM work.
- f. The Academy provides release time for participating in T-STEM Network activities.

BENCHMARK 5: Curriculum

Program Requirement 5.1: Rigor

- a. Curriculum, instruction and assessment are aligned.
- b. The Academy develops a detailed curriculum scope and sequence for the core disciplines.
- c. The scope and sequence demonstrates vertical alignment of content areas to the state standards.
- d. Assessment, aligned to the state standards and the curriculum, provides timely feedback on gaps in student comprehension.
- e. The Academy supports the success of all students to take and pass four years of high school math and four years of high school science.

Program Requirement 5.2: STEM curriculum

- a. The delivery of innovative curricular programs related to science, technology, engineering and math are well defined and aligned to state standards.
- b. Performance assessments are aligned to state standards.
- c. The Academy develops a plan for accelerating student achievement, particularly for low income and underserved students in math and science.
- d. The Academy develops a plan for bringing together math and science teachers, higher education faculty and private business employees together for continued discussion on expanding the T-STEM work.
- e. The Academy incorporates work-based, contextual learning with a global perspective into the curriculum.
- f. The Academy participates in extra-curricular academic activities centered on math, science, and technology, such as UIL, robotics and math competitions or science fairs.
- g. The Academy requires all students to complete an internship primarily focused in the state's economic development clusters and/or a senior project or capstone project, presentation, and defense.



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BENCHMARK 6: Instruction

Program Requirement 6.1: Shared practices

- a. Instruction is data driven.
- b. Teachers understand and effectively utilize tools and strategies to examine assessment results and refine instruction.
- c. The Academy has a structure for shared teacher responsibility and accountability for student learning across programs, content areas and classroom.
- d. Instruction is organized around clear expectations and state performance standards—students and teachers know what is expected of them.
- e. Teachers use an aligned scope and sequence that coordinates the integration of content areas and aligned resources.
- f. Teachers use high quality curricular materials that are aligned with state standards.

Program Requirement 6.2: STEM education integration

- a. The Academy promotes instructional strategies that integrate the teaching of STEM in a way that challenges students to innovate and invent.
- b. T-STEM coursework requires students to demonstrate their understanding of these disciplines in an environment that models real world contexts for learning and work.
- c. The Academy uses problem-based and project-based learning with a set of specific learning outcomes to support student learning.
- d. The Academy offers innovative programs that are aligned with state and/or national standards, related to science, technology, engineering and math, and employed as instructional tools.
- e. Work-based, contextual learning is delivered using applied and collaborative learning.

Program Requirement 6.3: Literacy plan

- a. School staff is committed to the belief that all students must become competent readers, writers and speakers. Instructional tasks are focused to accomplish this goal.
- b. Teachers connect content material to student lives and students share these connections through written and spoken communication.
- c. The Academy explicitly fosters widespread use of literacy strategies.
- d. The Academy selects appropriate curriculum and instructional materials for STEM education and core content discipline-based teaching and learning to meet the literacy needs of the students.

Program Requirement 6.4: Technology integration

- a. Technology is integrated into the Academy culture, curriculum, teaching strategies and daily operations for students and staff.
- b. All students have access to technology and media resources that support and enhance learning.



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Program Requirement 6.5: Assessment

- a. Diagnostic, on going and end of semester assessments for all students drive instructional decisions.
- b. State standards are used to develop common benchmark assessments.
- c. Student readiness assessments to determine and address gaps in learning are employed.
- d. Student Information systems track progress.

BENCHMARK 7: Strategic Alliances

Program Requirement 7.1: Parent and/or family participation

- a. The Academy plans for the development of strong school-family partnership.
- b. The Academy plans for ongoing open communication between teachers and parents.
- c. The Academy provides teacher professional development on parent communication, student advocacy, gang and drug prevention, etc. to support parents and students in attaining educational goals.
- d. The Academy promotes shared responsibility for the high performance of students through parent orientation, training, and involvement in school decision making.

Program Requirement 7.2: Business and school community

- a. The Academy identifies and secures key partners to support the Academy.
- b. The Academy develops a process for community engagement to introduce community partners to the school and provide ongoing opportunities for input regarding school development, e.g., informational meetings, town meetings, forums, etc.
- c. Partnerships exist with employers which serve to expose students and teachers to careers in science, technology, engineering, and math that are aligned with the state's economic development clusters in the form of activities such as internships.
- d. The Academy develops a process to gather data on the number and types of involvement of business and community partners.

Program Requirement 7.3: Institutions of higher education

- a. The Academy develops a Memorandum of Understanding (MOU) which articulates fiscal responsibilities and the delivery and acquisition of college hours.
- b. The Academy develops a tool to monitor and evaluate collaborative efforts with institutions of higher education.



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BENCHMARK 8: Academy Advancement and Sustainability

Program Requirement 8.1: Sustainability

- a. The Academy budget is balanced yearly.
- b. The Academy makes continued investments in math and science teacher professional development.
- c. Funding commitments from all partners are reflected in the larger school budget.
- d. The Academy develops a sustainable budget which projects what the Academy will look like in terms of staff, ADA and special population student funding, governance, technology needs and expenditures in the first year and in the subsequent four years. Charter operators should project facility costs in the budget.

Program Requirement 8.2: Strategic planning

- a. The Academy provides a chart representing the year-by-year roll-out of grade levels to be served upon opening and at full enrollment.
- b. The Academy develops a strategic plan for reaching a budget which supports staffing and expenditure using ADA and special population's student funding. Charter operators should delineate facilities funding in the budget.
- c. Academy leader, postsecondary partners, and key stakeholders encourage business partnerships and involvement of policymakers to ensure sustainability.
- d. The Academy actively seeks additional resources through partnerships, in-kind donations and grant writing.
- e. The Academy participates with the T-STEM Center in their geographic to plan and participate in high impact professional development.

Program Requirement 8.3: Progress

- a. T-STEM Academies will set high expectations across a broad range of performance measures and will become some of the highest performing campuses in the state.
- b. T-STEM Academies will develop an instructional plan which addresses all of the required performance measures.
- c. T-STEM Academies will develop internal progress indicators to measure progress against performance measures.
- d. T-STEM Academies will measure and document the accomplishment of, or progress toward, the stated goals, objectives, and activities on the Academy Blueprint Progress Tool.

Appendix C
ECHSI Core Principles



CORE PRINCIPLES

The Early College Vision

Every young person needs a postsecondary credential to thrive in today's world. Yet, as a nation, we fail to provide too many young people with the educational preparation they need and that our society demands. We, the founding intermediary organizations of the Early College High School Initiative, believe that an early college school is one innovation that provides traditionally underrepresented youth with a path to and through college.

Early college schools provide rigorous, supportive learning environments that blend high school and the first two years of college. They incorporate effective instructional and structural practices common to many small schools, but their designs go further, addressing the unique mission of the Early College High School Initiative: to raise the high school graduation and postsecondary success rates of underserved youth.

All schools in the initiative strive to remove the financial, academic, and psychological hurdles that prevent too many students from entering and succeeding in college. Already, early college students are showing us that more is possible and that, with well-conceived school designs that include sustained supports, a college degree is an achievable goal for every young person.

The Early College Core Principles

All early college schools adhere to five, interrelated Core Principles, which together constitute the fundamental beliefs of the initiative. Although all early college schools embrace these essential characteristics, they use a wide range of strategies for attaining them and for meeting the specific needs of their students, communities, and institutional partners.

The Core Principles that follow were developed collaboratively to provide a framework to guide others interested in planning and implementing early college schools. The document also offers strategies that are essential to attaining each principle.

Core Principle 1: Early college schools are committed to serving students underrepresented in higher education.

- ❖ Early college schools recruit low-income students, racial and ethnic minorities, first-generation college goers, and English language learners.
- ❖ Early college schools recruit students at risk of dropping out of high school, not matriculating to college, and not completing a degree, (i.e., students with poor attendance, struggling learners, students who are overage and under-credited).
- ❖ Student admission is not based solely on prior academic performance.

Core Principle 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.

- ❖ A formal, written agreement provides for full access to college courses, facilities, and support services.
- ❖ Dedicated representatives from all partner organizations meet regularly to review data, provide guidance, and make key decisions regarding planning, implementation, and sustaining the early college school.
- ❖ Faculty, staff, and community partners develop deep collaborations and participate, according to their role, in data-driven activities that advance instructional practice, curriculum development, staff development, and student support in order to build a college-going culture.
- ❖ All partners are actively engaged in developing sustainable funding for the early college school.

Core 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.

- ❖ Secondary and higher education partners have aligned high school and college requirements and curricula, and they co-develop an academic plan that incorporates opportunities for dual credit.

- ❖ The academic plan ensures that students strive for two years and complete a minimum of one year of college credit in the core disciplines.
- ❖ There are strategies and structures in place that provide students with the opportunity to complete four-year degrees, (e.g., a graduation plan, transfer or articulation agreements).

Core 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.

- ❖ Early college schools develop and implement a proactive support plan that includes multiple academic and social supports to ensure students' progression through college, articulates how and where services are delivered, and clearly describes the roles and responsibilities of staff and partners in their implementation.
- ❖ Early college schools address barriers to students' learning and academic achievement inside and outside of school.

Core Principle 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.

- ❖ Early college schools collect and share data with initiative partners to help demonstrate effectiveness at the local, state, and national levels.
- ❖ Early college schools work with their intermediaries to develop communications plans that further the objectives of the movement.
- ❖ Early college schools and their intermediaries work collectively to influence state and national policy, including legislation, regulations, and the allocation of funds.
- ❖ Early colleges, with their partners, are involved in preparing teachers and leaders to effectively meet the unique mission of the early college movement.

Appendix D
Interlocal Agreement/EPCC-EPISD



**Interlocal Agreement between El Paso County Community College District
and El Paso Independent School District for the Operation of the
Transmountain Early College High School**

This Interlocal Agreement is made and entered into between El Paso County Community College District (EPCC) and El Paso Independent School District (EPISD) for the purpose of developing the Transmountain Early College High School (hereinafter TMECHS) effective as of this 1st day of May, 2008.

1. Recitals.

Whereas, EPCC and EPISD desire to create a small school or learning community so that students graduate from high school and complete an associate transfer or technical degree in four years; and

Whereas, EPCC and EPISD intend to enroll students in grades 9-12 in the TMECHS and to provide the financial support necessary to do so, including all resources allowed by law, including state, local, and federal funds.

Whereas, a grant from Community Foundations of Texas will be used to plan the TMECHS and to contribute to its success in years one through four of operation and the sustainability of the TMECHS beyond that period will be the responsibility of the parties to this agreement; and

Whereas, TMECHS will be located on the EPCC Transmountain Campus with approximately 500 students; and

Whereas, the goals are to reduce dropout rates, attract and better prepare students for higher education, assure students of the support necessary to be successful in college, and provide EPISD students a seamless transition between high school and college; and

Whereas, EPISD and EPCC are authorized to enter into an Interlocal Agreement, pursuant to Section 791.001, Texas Government Code; and

Whereas, this Agreement will provide efficiencies and cost savings to both EPISD and EPCC and will benefit the students and taxpayers of both EPISD and EPCC;

Now, therefore, for and in consideration of the recitals, agreements and covenants set forth herein, the parties hereby agree as follows:

2. **Mission Statement.** The Transmountain Early College High School will provide a select population of EPISD students a unique educational opportunity to attend both high school and college in a special campus environment that will challenge students to excel in their academic and personal endeavors. Students will have the opportunity to earn a high school diploma and a two year Associates Degree upon graduation.

3. **Term.** The term of this Agreement is for five(5) years commencing on May 1, 2008 and concluding on April 30, 2013, unless terminated earlier pursuant to paragraph 12 hereof.

4. **Academic Plan.** An academic plan will be developed that will enable each student to earn a high school diploma and an Associates Degree. College credit will be earned through dual credit courses and concurrent enrollment.

5. **General Roles and Responsibilities.**

A. **EPCC.** EPCC will be responsible for:

- (i) Providing the land for portable and modular buildings and site preparation, including handicapped accessibility as required by applicable law;
- (ii) Preparing the site for portable and modular buildings; and providing utility lines and stub-outs at the building sites, concrete footings as needed for portable and modular buildings, and skirting for the portable buildings;
- (iii) Assisting with the development of the dual credit college (high school) curriculum.

B. **EPISD.** EPISD will be responsible for:

- (i) Recruiting students;
- (ii) Hiring and supervising staff;
- (iii) Providing and transporting portable classrooms and modular buildings and hook-ups for installation;
- (iv) Developing the high school curriculum;
- (v) Operating and managing the school;

6. **Staffing.** All Staff for the TMECHS shall be employees of EPISD. EPISD shall pay all salaries and provide benefits. EPCC shall have no responsibility to hire, compensate or provide benefits to any of the staff of TMECHS. Staff for TMECHS will be hired by EPISD over a five (5) year period.

Once it is fully staffed for 500 students, TMECHS will have the following personnel:

Principal
Dean of Students or Assistant Principal

Counselor
20-25 Teachers
Nurse
Administrative Assistant Clerk
Security (jointly EPCC/EPISD)

The staffing will aim for a ratio of twenty-five students per class. Some staff may need to be on a part-time basis to better accommodate the needs of students.

7. Use of Facilities:

A. **Buildings and Site.** EPCC will provide a site for the TMECHS on the Transmountain Campus. EPISD will move single classroom portable buildings currently owned by it to the site set aside by EPCC at EPISD's expense and will place the buildings for use as TMECHS classrooms. EPCC will place stucco on the exterior of the single classroom portable buildings within one year of their installation at its expense in order to coordinate their appearance with other buildings on the EPCC campus, but EPISD shall make such other improvements, additions, and construction to the portable building interiors, such as partitioning and related work, as may be reasonably necessary for the use of the TMECHS program. The portable buildings shall remain the property of EPISD except as provided hereinbelow. The parties agree that said single classroom portable buildings moved to the site by EPISD will have only nominal value at the conclusion of five years from the effective date of this Agreement. If this Agreement remains in effect for five years, said single classroom portable buildings shall become the property of EPCC, as further consideration to it for its performance hereunder, but shall remain dedicated to the ECHS program for so long as the program exists. Accordingly, if this Agreement is terminated at any time after five years, said single classroom portable buildings will be left on the EPCC campus, and there will be no need for EPCC to reimburse EPISD for any amounts for the value of said buildings. However, if this Agreement is terminated or non-renewed within five years of the date hereof, EPISD will be reimbursed for the reasonable fair market value of said portable buildings, and said portable buildings shall become the property of EPCC. EPCC and EPISD shall attempt in good faith to mutually agree on the fair market value. If EPCC and EPISD cannot mutually agree on the reasonable fair market value of the buildings, they shall submit the dispute to alternative dispute resolution procedures authorized by Chapter 2009 of the Texas Government Code, and should those procedures not result in resolution, then they shall submit the matter to binding arbitration by an arbitrator mutually appointed by the parties, pursuant to the Texas General Arbitration Act, codified at Chapter 171 of the Texas Civil Practice & Remedies Code.

Additionally, EPISD will install modular buildings at the site set aside by EPCC, specifically for the TMECHS program, at its expense, for use as a cafeteria, science lab(s), and possibly other purposes. These modular buildings will remain the property of EPISD. If this Agreement is terminated or non-renewed, EPCC may purchase such modular buildings from EPISD if the parties can mutually agree on a purchase price. Otherwise, EPISD shall remove the modular buildings from EPCC property at its expense within one year of the effective date of the termination or non-renewal. EPCC will not place stucco on the exterior of said modular buildings, or otherwise do anything that would complicate or obstruct the removal of said modular buildings from EPCC property by the EPISD at such time as this Agreement is terminated or non-renewed, or

at such earlier time as such modular buildings may no longer be needed for the EC'HS program. Provided, however, that if this Agreement remains in effect for 30 years, then said modular buildings shall become the property of EPCC, as further consideration to it for its performance hereunder, but shall remain dedicated to the EC'HS program for so long as the program exists.

B. Use of Facilities. EPISD shall use the facilities solely for the TMECHS and other school-related functions, and for no other purpose, without the prior written consent of EPCC.

C. Maintenance. EPCC shall provide grounds maintenance at its cost. EPISD shall provide maintenance of all of the TMECHS buildings as necessary, including maintenance of HVAC and mechanical systems. EPISD will also provide custodial staff to clean and maintain the buildings. EPISD shall be responsible only for day to day maintenance.

D. Utilities. EPCC shall provide and pay for all utilities used by the TMECHS including electricity, water, sewer and gas. EPISD shall provide and pay for all communications facilities including telephone, email and computer networks.

E. Insurance. EPISD shall insure the portable buildings under its property insurance policies against all casualty loss for so long as the buildings are owned by it. In the event of casualty loss of all or any part of the buildings, the owner of the building shall be responsible for rebuilding or repair caused by the casualty loss.

F. Ground Lease. In consideration of the mutual covenants and agreements of this Interlocal Agreement, and other good and valuable and consideration, but without the necessity of payment of any monetary rent as such, EPCC as Landlord, demises and leases to EPISD as Tenant, and EPISD leases from EPCC, on a ground lease basis, that real property upon which the EPISD portable and modular buildings will be placed, in accordance with the site drawing marked as Exhibit 1, attached hereto, and incorporated herein. EPCC grants EPISD reasonable ingress and egress, including, without limitation, the right to use all adjacent streets, sidewalks, alleys, and other means of access, to and from the real property covered by this ground lease through adjoining property owned and/or controlled by EPCC. The term of this ground lease shall be coterminous with the term of this Interlocal Agreement, provided, however, that to the extent the ownership of any buildings is transferred hereunder to EPCC, EPISD shall be considered to have a lease on the building itself as well as the underlying real property for so long as this Interlocal Agreement is in effect. EPISD has inspected the real property, and accepts same in its present condition AS IS, such property, in EPISD's sole judgment and opinion, being suitable for EPISD's intended use and purpose. After certain sites on the property are prepared by EPCC for the installation of portable and modular buildings, EPISD shall inspect such sites and the corresponding preparation, and should installation of the buildings then proceed, EPISD shall be deemed to have accepted the real property and improvements in such condition, AS IS, WHERE IS, as being suitable for EPISD's use and purpose. EPCC makes no representation or warranty, express or implied, regarding the real property or the improvements EPCC is to make, as to merchantability or fitness for a particular purpose or use in any manner whatsoever. Provided, however, that EPCC shall remain responsible to correct and repair any defects in materials or workmanship which may be discovered within four years of the effective date of this Agreement regarding the items that it is responsible to provide under Article 5.A.(i) and (ii) hereinabove, including the pads, footings, and stub-outs.

8. **Student Services.** Except as expressly set forth herein, EPISD shall provide all student services for the students in the TMECHS, including, without limitation, health services, counseling services, tutorial services, transportation, food service, and all high school books and teaching materials. EPISD intends to use the Achievement Via Individual Determination (AVID) Program. TMECHS students will adhere to all the requirements of the EPISD Code of Conduct and state law applicable to public school students. Students will also adhere to the EPCC Student Code of Conduct. In the event of any inconsistency between the EPISD Student Code of Conduct and the EPCC Student Code of Conduct, the EPISD Code of Conduct and applicable provisions of Chapter 37 of the Texas Education Code shall control with respect to the students.

9. **Professional Development of Staff.** EPISD shall be responsible for professional development of all full-time and part-time staff assigned to TMECHS, including, without limitation AVID training, staff development aimed at working with at-risk students and technology. EPCC shall assist in professional development of staff to the extent the staff are teaching college level courses.

10. **Enrollment in College Courses.** As a prerequisite to enrollment in college courses, each student shall apply for and be admitted to EPCC and shall have successfully completed appropriate placement exams. EPCC shall provide materials, support and guidance to assist students in the application process and taking of placement exams.

11. **Fees, Tuition and Books for College Courses.** EPCC shall waive tuition and fees for college credit courses for each TMECHS student enrolled in such courses. EPISD will provide necessary college textbooks and teaching materials. EPISD will also fund placement testing fees.

12. **Renewal; Termination.** Upon completion of the initial term of this Agreement, it shall be automatically renewed for successive terms of one (1) year each unless either party shall give notice of nonrenewal at least ninety (90) days prior to the end of the initial term or ninety (90) days prior to the end of any renewal term. Notwithstanding the foregoing, either party shall have the right to terminate this Agreement with or without cause at any time during the initial term upon written notice to the other party. In the event of termination during the initial term of this Agreement, the effective date of termination shall be as of June 30 following the notice; provided, however, that each party retains the continuing right to terminate this Agreement at the expiration of each budget period of that party if funds are not appropriated by that party for continuation of the program during its succeeding budget period. It is the intent of the parties that no termination shall be made during the middle of the school year which will disrupt the academic process for the students of TMECHS, unless the parties mutually agree.

13. **Recruiting and Selection of Students.** EPISD shall be solely responsible for recruiting and selection of students for the TMECHS. An attempt will be made to recruit students from each EPISD middle school. Other slots may be granted to out-of-district transfers. Remaining unused slots will be granted to under represented groups targeted for recruitment.

14. Steering Committee. EPISD and EPCC will create a Steering Committee to address any issues that arise with respect to the conduct of this program including, without limitation:

- (i) Operational Processes; Curriculum Processes; Curriculum, Technology and Recruitment; External Funding; Facilities; Marketing; Research
- (ii) Problems or concerns;
- (iii) Recommendations regarding the effective coordination between EPCC and EPISD.

The Steering Committee shall meet at least quarterly and shall consist of, to the extent possible, an equal number of representatives from both EPCC and EPISD. The Steering Committee shall make reports, at least annually, to their respective boards.

15. Advisory Council. An advisory council will be created for the purpose of establishing local, state, and national affiliations, to leverage opportunities for fund development, innovative projects, and overall sustainability. The advisory council shall meet at least twice annually and shall consist of representatives from EPCC, EPISD, and the El Paso region.

16. Liability of EPCC and EPISD. This Agreement is not intended to alter or reallocate any defense or immunity presently authorized by law, or to create or transfer any liability arising under the law. EPISD and EPCC shall each bear any liability or risk of loss for claims arising from the acts or omissions of their respective employees and agents. Each party agrees that it shall be responsible for its own officers, agents and employees who are performing duties under this Agreement, and neither shall be liable or responsible for the acts or omissions of the other's officers, agents or employees. For purposes of responsibility and liability for any claims by its students, said students shall be considered to be students of the EPISD. EPISD and EPCC expressly maintain all rights of governmental immunity or sovereign immunity from litigation or liability, to the extent provided by applicable law. This Agreement does not create any obligation by one party to indemnify the other, nor does it create any rights in any third parties.

17. Funding for TMECHS. The primary initial source of funding for TMECHS will be a grant (the "Grant") from the Gates Foundation through the Communities Foundation of Texas. EPISD will be the fiscal agent for the Grant. EPCC and EPISD will enter into other agreements and contracts as may be necessary to comply with the terms of the Grant, which shall be deemed to be pursuant to this Interlocal Agreement. To the extent any provision of the Grant is inconsistent with this Interlocal Agreement, the terms and conditions of the Grant shall control.

18. Miscellaneous.

A. Integrated Agreement. This Agreement constitutes the entire agreement of the parties respecting the subject matter hereof and supersedes all prior agreements or understandings, whether written or oral.

B. Notices. Any notice authorized or required to be given under this Agreement shall be delivered or sent to the parties at the following addresses:

El Paso ISD
P. O. Box 20100
El Paso, Texas 79998
Attn: Superintendent of Schools

El Paso County Community College District
P. O. Box 20500
El Paso, Texas 79998
Attn: President

C. **Compliance with Law and Regulations.** The parties shall comply with all applicable local, state and federal laws, ordinances, regulations and orders.

D. **Governing Law.** This Agreement shall be governed in all respects in accordance with the laws of the State of Texas, and shall be performable in El Paso County, Texas.

E. **Assignment Prohibited.** This Agreement, its rights, duties and responsibilities, may not be assigned without the prior written agreement of the parties.

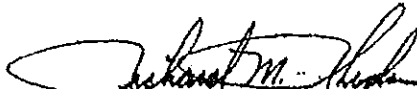
F. **Counterparts.** This Agreement is being executed in multiple counterparts, each of which shall constitute an original and all of which together shall constitute but one and the same instrument.

Signed and approved effective as of the date shown above.

EPCC:

EL PASO COUNTY COMMUNITY COLLEGE DISTRICT

BY:


RICHARD M. RHODES, PH.D., PRESIDENT

APPROVED AS TO FORM:

EDWARD DUNBAR, EPCC GENERAL COUNSEL



EPISD:
EL PASO INDEPENDENT SCHOOL DISTRICT

BY: Lorenzo Garcia
Lorenzo Garcia, Ed.D., SUPERINTENDENT

APPROVED AS TO FORM:

S. ANTHONY SAEI, EPISD GENERAL COUNSEL

S. Anthony Saei

Appendix E
**El Paso Community College Procedure/
High School Dual Credit Program Requirements**



2.3. EPCC Dual Credit Procedure

EL PASO COMMUNITY COLLEGE PROCEDURE

For information, contact Institutional
Effectiveness: (915) 831-2614

6.00.01.30 High School Dual Credit Program Requirements

APPROVED: October 31, 2003 REVISED: January 26, 2007

AUTHORIZING BOARD POLICY: 6.00.01

OBJECTIVE: To establish procedures for the implementation of the High School Dual Credit Program. This procedure outlines responsibilities of high schools and El Paso Community College (EPCC) regarding program development and student services for high school Dual Credit students.

NOTE: Information and requirements contained in the procedure are subject to change without notice to maintain compliance with State educational rules.

The Dual Credit Standing Committee will review the procedure annually. If recommendations for changes are made, they will be forwarded to the Vice-President of Instruction for approval.

PROCEDURE:

- I. *Texas Education Code Section Chapter 9. Subchapter H Partnerships between Secondary Schools and Texas Public Two-year Associate Degree-Granting Institutions* establishes authority and rules for two-year associate degree-granting institutions to enter into agreements with secondary schools to offer courses that grant credit toward the student's high school curriculum requirements and college-level credit. A signed formal partnership (see attachment entitled *Interlocal Agreement*) must be in place prior to offering courses. The Vice President of Instruction maintains all signed formal partnership agreements.
- II. Timelines
 - A. The high school administrator determines course needs and submits completed documentation to the Office of Recruitment and School Relations (hereafter referred to as "Recruitment") within EPCC timelines.
 - B. All materials required by an EPCC dean to credential a high school instructor must be submitted 20 days before the start of a class.
 - C. All registration materials and activities (i.e. student admission applications, Dual Credit Class Roster [DCCR], placement testing) must be completed prior to the start date of the class. Please see difference for Distance Education (DE) courses.
 - D. No new students (students not on the original DCCR) will be added to the course after the first day of class.
 - E. Problems with students on the DCCR (e.g. immigrations status, holds, placement testing issues) must be corrected before the first day of class.



III. Definitions—See the *Dual Credit Handbook* (www.epcc.edu/dualcredit/)

IV. General Requirements

- A. Courses offered for Dual Credit must be in the EPCC approved course inventory and pertain to required high school curriculum.
 - 1. Developmental courses shall not be offered to high school students under Dual Credit.
 - 2. High school students are expected to meet the same academic rigor as regular college-level students.
 - a. Dual Credit courses offered at the high school and the corresponding course offered at EPCC campuses must be equivalent with respect to curriculum, materials, instruction and rigor.
 - b. EPCC course syllabi and textbooks must be used.
- B. An EPCC Dean shall approve teachers as instructors for the Dual Credit courses. Dual Credit high school teachers must meet the minimal credential requirements of the Southern Association of Colleges and Schools and other applicable agencies.
 - 1. Dual Credit high school instructors shall be employed by EPCC on a voluntary basis.
 - 2. An EPCC Dean/faculty coordinator shall orient, supervise and evaluate Dual Credit high school instructors. Dual Credit instructors will also be evaluated by Dual Credit students.
- C. Academic Policies and Student Services
 - 1. All academic policies applicable to courses taught on EPCC campuses shall apply to Dual Credit high school students. These policies include, but are not limited to, placement testing, appeals, processes for disputed grades, drop policy and syllabi distribution. Both high school and college credit will be transcribed immediately upon a student's completion of the course.
 - 2. EPCC will provide student support services to facilitate the admissions, placement testing, evaluation and registration of the students as established in the procedural steps below.
 - 3. Dual Credit students may utilize the same support services that are available to EPCC students, including special accommodations through the Center for Students with Disabilities (CSD).
 - a. Dual Credit faculty who has a student with a disability in the class must follow the same requirements as any other EPCC faculty member. Dual Credit classes must reflect college-level work customarily required of all students at the same college level. No modification of the curriculum or instruction is allowed.
 - b. A student with a disability may have only the accommodations recommended by the EPCC Counselor from CSD.
 - 4. Class enrollments will be limited to the optimum levels as determined by EPCC (see "Optimums" in the attachment entitled *Course Optimum/Contact Hours Chart*).



5. In order for tuition and fees to be waived for EPCC Dual Credit courses, the following criteria must be met. Questions regarding the following requirements should be directed to the EPCC Dual Credit Coordinator.
 - a. High school, charter school, and private school students:
 - (1) The college course is offered at the high school.
 - (2) The onsite or DE college course is offered as part of the high school schedule.
 - (3) All required documentation must be completed as outlined under the Dual Credit Program Requirements.
 - b. Home schooled students: Documentation consisting of transcripts and curriculum must be provided indicating that the home high school course being replaced by the college course is required for high school graduation.
 - c. Occupational Education courses being taken for Dual Credit may be held on EPCC District property when specialized equipment needed for the class is otherwise not available at the high school campus. With the exception of (1) above, all other criteria, (2) and (3) must be met.
 - d. High school students who enroll in regularly scheduled college courses (not designated by EPCC as Dual Credit) will be considered as early admissions students and will not be eligible for waiver of tuition and fees under this procedure.

D. Student Eligibility

1. As a condition of participating in the Dual Credit Program, students and parents/legal guardians must sign a *Request for High School Early Admissions/ Dual Credit Program* form authorizing EPCC to release assessment scores, grades and academic progress reports to the high school. A high school student is eligible to enroll in Dual Credit courses in the eleventh and/or twelfth grade. Early College High School students follow State guidelines.
2. Students must complete the admissions process and take the EPCC placement tests in math, reading, and writing and any other course-specific placement test (e.g. immunizations). Students must also meet program-specific requirements. Their performance on the placement tests will determine which courses they may enroll in at EPCC. Students will be permitted to enroll only in college level courses (as determined by the current EPCC course placement rules) and must meet all prerequisites designated for desired courses.
3. High school students shall not be enrolled in more than two college-level courses per semester. As an exception, a third class may be taken during the first semester if the high school grade average is 85 or higher. A third class may be taken for continuing Dual Credit students if their college GPA is 3.0 or higher. No fourth class will be authorized.

V. High School Requirements

- A. Identify and certify students qualified to participate in the Dual Credit College Enrollment Program. The prospective high school instructor must agree to abide by the EPCC course syllabus and textbook requirements.
- B. Provide adequate classroom and other learning facilities.
- C. Identify potentially qualified teachers to apply to EPCC for participation in the program. The prospective high school instructors must agree to abide by the EPCC course syllabus and textbook requirements.



- D. Provide a High School Dual Credit Coordinator (HS Coordinator) to act as liaison with EPCC with regard to all program matters.
- E. Identify students each semester and provide EPCC Recruiters with a signed proposed class list for each class (30 days prior to the start of an on-site class and 90 days prior to the start of a DE class).
- F. Composition of Class. Dual Credit courses may be composed of Dual Credit students only or of dual and college credit students. Exceptions for a mixed class, which would also include high school credit-only students, may be allowed under only one of the following conditions:
 - 1. If the course involved is required for completion under the State Board of Education Recommended or Distinguished Achievement High School Program graduation requirements, and the high school involved is otherwise unable to offer such a course.
 - 2. If the high school credit-only students are advanced placement students.
 - 3. If the high school credit-only students in a career and technology/college workforce education course will receive articulated college credit.
- G. Verify and sign the Dual Credit Class Roster (DCCR). If additional students are recommended for the class, an Addendum DCCR must be processed.
- H. Transcribe credit for the corresponding high school course. The high school credit must be the same credit earned for the College course.
- I. Provide a high school facilitator for students enrolled in DE courses.
 - 1. The facilitator is the high school designee in the classroom who ensures students complete their online assignments. The facilitator, in collaboration with the EPCC instructor, ensures the students do well in their courses. They are not the instructor of record, and they DO NOT submit grades for students. The EPCC instructor of record for DE courses will submit grades.
 - a. Verify that every student has the required text and class materials as indicated on the course syllabus.
 - b. Encourage students to spend 9 to 12 hours per week on each DE course to promote their success.
 - 2. The high school facilitator must confirm that only the students on the Certified Class Roster are participating in the DE class. Any discrepancies must be reported immediately to the HS Coordinator.
 - 3. For more information on the duties and responsibilities of a DE facilitator, please refer to the Dual Credit Handbook (www.epcc.edu/dualcredit).
- J. Submit students' College Placement test scores to the EPCC Testing Office 5 days prior to the first day of class (when the high school is its own College Placement test site).

VI. EPCC Requirements

- A. Provide course offerings as agreed to by both parties.

Revised September 11, 2009.



- B. Provide EPCC facilities as appropriate, but predominately use the facilities of the high school campus to conduct Dual Credit instruction.
- C. Interview and contact instructors from the high school generated pool of the high school teacher applicants for assignment as faculty in the program. All instructors must meet the minimum requirements as specified by EPCC or other specialized licensing/ accrediting agencies. Official Transcripts of instructor credentials must be kept on file at the College.
- D. Select, supervise, and evaluate instructors using the same or comparable procedures used for faculty at the main campus (to include on-site visits).
- E. Test all participating students as deemed appropriate for student enrollment. (Note: Some school districts operate approved test centers using the EPCC approved placement test. Test scores from those districts, when officially transmitted to EPCC, will be accepted for EPCC course placement purposes for Dual Credit students.)
- F. Transcript grades immediately upon a student's completion of the performance required in the course (see The Texas Higher Education Coordinating Board *Chapter 4: Rules Applying to all Public Institutions of Higher Education in Texas, Subchapter D. Dual Credit Partnerships Between Secondary Schools and Texas Public Colleges, Section 4.85 Dual Credit Requirements*).
- G. Provide a certified report of grades to the high school campus for each participating student at the end of each course. Reporting of grades may occur throughout the semester. However, the reporting may not coincide with the high school's reporting schedule.
- H. Conduct each class using the Highest Standards, as defined by Texas Education Agency in the conduct of each class.
- I. Make records available for any high school campus audit requirements.

VII. EPCC Dual Credit Coordinator

The EPCC Dual Credit Coordinator will serve as the Academic and Occupational liaison between the high school and EPCC to assist the Dual Credit instructor with issues relating to syllabi, curriculum, textbooks, and overall course requirements. Requests for exceptions to the following activities should be directed to the EPCC Dual Credit Coordinator.

- A. Assist the High School Dual Credit Coordinator (HS Coordinator) to determine course needs and the completion of Dual Credit Projection Form 1 within agreed upon timelines.
- B. Identify potential high school Dual Credit instructors with the help of the HS Coordinator. The instructor must fill out all required employment documents and a volunteer form prior to the high school's offering the course.
- C. Collect all necessary credentialing documentation from the high school Dual Credit instructor, and submit it to the designated EPCC Dean. The designated EPCC Dean will determine if the high school instructor meets credential requirements for the course.
 - 1. Explain the credential requirements needed to teach a particular course.
 - 2. Deliver, explain, and assist potential Dual Credit instructor with all required EPCC employment documents.



- D. Compile a list of high school teachers certified by EPCC to teach online courses.
- E. Provide a copy of the official class roster to the onsite facilitator when the class is a DE class.
- F. Maintain a list of all credentialed on-site EPCC Dual Credit instructors, and inform Recruitment of qualified instructors.
- G. Track the number of semesters during which Dual Credit high schools use each textbook for on-site classes. All textbooks for on-site courses must be EPCC discipline approved and used for no more than four years.
- H. Provide to the high school Dual Credit contacts textbook information for all Dual Credit courses.
- I. Facilitate the distribution of the Student Faculty Evaluations with the assistance of Recruitment.
- J. Conduct a mandatory orientation for all on-site high school Dual Credit faculty and facilitators prior to the first day of classes for an EPCC semester.
- K. Provide Deans with enrollment data.

VIII. The EPCC Dean

- A. Provide the EPCC Dual Credit Coordinator a list indicating all courses each high school instructor is credentialed to teach.
- B. Credential high school Dual Credit instructors.
 - 1. Make arrangements to interview the prospective high school instructor and verify his/her credentials.
 - 2. Ensure that prospective high school instructors agree to abide by the EPCC course syllabus and textbook requirements.
 - 3. Consider alternative instructional delivery modes when the prospective high school instructor does not meet the credential process.
- C. Ask the faculty coordinators to contact the high school instructors and schedule a meeting to review the following: course syllabus, college textbook, class rosters, grade records, specific materials that may be required (e.g. computer software, tools, specimen needed for Biology, or wiring for a network course), and verify course contact hours.
- D. Create DE course sections, list CRN numbers on DCCR, and assign DE faculty. The Dean will inform Recruitment of the number of DE sections available for a particular semester.
 - 1. Send the completed DCCR to the Registrar.
 - 2. Send a copy of the completed DCCR to the DE office and to the EPCC Dual Credit Coordinator.
 - 3. Send a copy of the DCCR to instructors teaching DE Dual Credit courses.
- E. Ensure that the Student Faculty Evaluations process (delivery/pick up) is explained to the high school instructor.
- F. Ensure Dual Credit instructors are evaluated.
- G. Notify high school Dual Credit faculty of division and discipline meetings.

Revised September 11, 2009.



IX. Office of Recruitment and School Relations (Recruitment)

- A. Contact the EPCC Dual Credit Coordinator to begin the instructor credentialing process. Recruitment will notify the high school instructor to contact the EPCC Coordinator.
- B. Notify Deans when high schools request DE courses. If the resources are available, Deans will contact the DE office.
- C. Serve as the Student Services liaison between the high school and EPCC to assist with the following:
 - 1. Schedule necessary student/parent information sessions.
 - 2. Conduct student presentations.
 - 3. Assist students with the completion of the admissions application and schedule placement testing and counselor advising sessions.
 - 4. Collect required college applications and registration forms and distribute these documents to appropriate EPCC student services offices.
- D. Prepare the DCCR (from the proposed class lists provided by the high schools).
 - 1. Receive a signed proposed class list from the high school.
 - 2. Create the DCCR.
 - 3. Submit the DCCR to the high school for verification and signature. No additional names may be added to the DCCR.
 - 4. Process an addendum to the DCCR if additional students need to be added to the course.
 - 5. Deliver a copy of the DCCR to the high school principal and HS Coordinator.
- E. Initiate New Student Orientation Sessions (NSOs).
 - 1. Prepare NSO packets.
 - 2. Coordinate campus ID sessions.
 - 3. Schedule on-campus tours.

X. Admissions and Registration

Admission and registration of Dual Credit students are two separate processes.

- A. A student must apply for admission and be accepted to the College prior to registering in Dual Credit courses. This requires a one-time completion and submission of the Admissions Application form, Early Admissions Form and current high school transcript.
- B. Admissions will determine each student's eligibility for admission and residency status based on current State and federal guidelines. Admissions will notify the student, Recruitment, and the high school of any discrepancies in the admissions documents. Upon completion of the application file, Admissions will send the student a letter of acceptance. Admissions will complete the following activities:
 - 1. Create Dual Credit class sections based upon the SRFs from the Deans.
 - 2. Register students into appropriate classes as indicated on the DCCR. (Problems with student registration, holds, and/or prerequisites must be corrected by the first day of class in order for students to be registered and to access online classes.) Notify appropriate offices of ineligible students.



3. Indicate ineligible students on the DCC on the first day of class. Submit a copy of DCCR and official First Day Class Roster to the principal with a letter indicating students that should not be enrolled in the class.
 4. Generate official class and census rosters.
 5. Transcript college grades.
- C. Registration into courses takes place after the student has been admitted to EPCC, completed required placement testing, received academic advising and participated in new student orientation. The student does not go through the admissions process for subsequent semesters of attendance.

XI. Testing Services

- A. Provide placement testing sessions according to State and EPCC requirements. Initial assessment and any retesting for students must comply with current EPCC placement testing policies and retest timelines.
- B. Provide accommodations to students who request special test accommodations for documented disabilities as recommended by the EPCC Center for Students with Disabilities after a thorough review of the request and disability documentation.

XII. Counseling Services

- A. Make presentations to students, parents and high school administrators.
- B. Review and discuss test scores with students, parents and high school administrators.
- C. Coordinate and conduct New Student Orientation Sessions (NSOs).
- D. Check DCCR for verification that a student has been placed appropriately.
- E. Assist students, parents, and high school administrators to understand College policies and procedures regarding:
 1. EPCC's grading system,
 2. Conflict in grade received,
 3. Petitions to appeal a decision, and
 4. Scheduling of retests.
- F. Ensure students' test scores are posted prior to the first day of class.

XIII. Financial Aid

Financial Aid will appropriately adjust charges based upon the Roster. EPCC will waive the tuition and appropriate fees for Dual Credit courses.

XIV. Distance Education Office (DE Office)

- A. Use distance education modes of delivery if an instructor is not available at the high school.

Revised September 11, 2009.



3. Indicate ineligible students on the DCC on the first day of class. Submit a copy of DCCR and official First Day Class Roster to the principal with a letter indicating students that should not be enrolled in the class.
 4. Generate official class and census rosters.
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XIV. Distance Education Office (DE Office)

- A. Use distance education modes of delivery if an instructor is not available at the high school.

Revised September 11, 2009.



- B. Recruitment will notify the Dean's office when high schools request DE courses. If the Dean approves the request, the Dean will contact the DE office. The DE Office will complete the following activities:
 - 1. Schedule a technology assessment with the HS Coordinator to assess distance education capabilities at the high school.
 - 2. Identify the distance education mode considered to be the most effective for the Dual Credit students based on the technology assessment and in coordination with the Dean.
 - 3. The EPCC Dean and the DE office will approve the delivery mode based on the assessment.
- C. Contact the EPCC Dean to approve a DE alternative if the need is identified 90 days before the start of a new class. This helps to ensure:
 - 1. A distance education certified and credentialed instructor is available to teach the course.
 - 2. The course is available for DE delivery, and that the textbook and any special materials such as access codes for online course content are available for students.
- D. Contact the appropriate Dean for approval 180 days prior to the scheduled class start date if a new course is not available for distance education delivery.
- E. Schedule a mandatory DE orientation and training session at EPCC in collaboration with the HS Coordinator, prior to the first day of classes for the HS Coordinators and Facilitators.
 - 1. This orientation and training is required to enable HS Coordinators and Facilitators to teach and assist students to log on to online courses by the first day of class.
 - 2. HS Coordinators and Facilitators will receive their course's (s') ID and Password at the orientation and training session.
- F. Schedule a mandatory orientation for students enrolled in television courses at an EPCC Campus prior to the first day of class.
- G. Provide continuing support (i.e., login assistance, review session, room arrangements, delivery of exams, and mailing of graded homework back to students) once all Dual Credit distance education students are enrolled.
- H. Finalized Class Rosters will be provided to the DE office by the Registrar prior to the EPCC distance education class start date to facilitate support requirements.
- I. Provide upon request, additional training and technology assessment updates. HS Coordinators should contact the DE office to schedule training and technology assessments.

Appendix F

ECHSI Benchmark Tool for Early College High Schools

Benchmark Tool for Early College High Schools

Background

The ECHS benchmarks, developed collaboratively by the early college intermediary organizations (Antioch University Seattle, City University of New York, Communities Foundation of Texas, Foundation for California Community Colleges, Board of Regents of the University of Georgia, KnowledgeWorks Foundation, Middle College National Consortium at LaGuardia Community College, National Council of La Raza, Portland Community College, New Schools Project, SECME, Inc., Utah Partnership for Education, and Woodrow Wilson National Fellowship Foundation), establish a set of ideals to which all early college high schools strive. The document serves as a planning, improvement, and teaching tool—one that can help intermediaries, school leaders, and postsecondary partners guide an early college high school's growth.

Directions for Using the Benchmark Tools

The following tools, one for schools in a planning phase and one for schools in an implementing phase, are based on the ECHS benchmarks. Intermediaries, school leaders, postsecondary partners, and faculty can use each as a self-assessment, planning, and teaching tool.

It is most productive to have each person (intermediary, school leader, postsecondary partner, and faculty) complete the tool individually. When the group convenes, the differences in perspective provide for a rich conversation.

For each indicator, rate how visible that practice is in the school on a scale of 1-5, with 5 being “most visible.”

Then rate the importance of that practice to your school's goals from low to high.

If you feel that you don't have enough knowledge to respond to a particular indicator, skip it.

Reconvene in a group to discuss your responses and to identify next steps in the development of your early college high school.

**Benchmark Tool for Early College High Schools:
Beginning Phase**

Early college high schools establish the enabling conditions necessary to prepare students for success in a rigorous, well-structured academic program leading to high school graduation and up to two years of college credit.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Mission	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop a mission consistent with ECHS Core Principles and a strategy for establishing a shared mission with parents/guardians, students, faculty, and staff. Conversion schools plan process to develop and share mission with all stakeholders. 	5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High
Leadership	<ul style="list-style-type: none"> School leader, staff, postsecondary partner, and key stakeholders believe all students will achieve and reaffirm that belief in written materials on the school. School leader, postsecondary partner, and key stakeholders understand depth and breadth of preparing targeted population for college expectations. School leader, postsecondary partner, and staff use student data, recording strengths and weaknesses, to plan targeted strategies for academic progress. School leader, postsecondary partner, local district, and key stakeholders develop a school design plan that ensures that the school has autonomy over key factors to its success. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High
School culture and design	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders collaborate to develop a school design plan to: <ul style="list-style-type: none"> Structure the school day; Address state, district, and college requirements; Define path to achieve up to two years of college credit; Involve middle grades; Define academic and social supports. School leader, postsecondary partner, and key stakeholders design school to meet the attributes of early college high schools: <ul style="list-style-type: none"> Common focus on research-based goals and intellectual mission; Shared, clear, high expectations and standards, with all students completing a coherent, rigorous course of study; Small, personalized learning environments with no more than 400 students per high school (Early college high school may also link with feeder elementary and middle schools); Respect and responsibility among students, among teachers, and between students and teachers; Time for teachers/staff to collaborate and for the inclusion of parents and the community in an education partnership; Emphasis on performance, with students promoted based on demonstrated competency; and Technology used as a tool for designing and delivering engaging and imaginative curricula. 	5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High

¹ Depending on the model, key stakeholders may include parents, guardians, students, teachers, postsecondary faculty, district leadership, community-based organizations, community-based agencies, teachers' union, tribal governments, business partners, and/or local policymakers.
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Students completing early college high schools graduate with a high school diploma and up to two years of college credit.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Student attendance	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop a strategy to motivate student attendance, e.g., student engagement in learning, early intervention strategies, counseling, and parent/family outreach. 	5 4 3 2 1	Low Med High
Student persistence	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop a strategy to encourage persistence, e.g., parent/family outreach, early intervention strategies, mentoring, tutoring, counseling, and other supports for academic and socio-emotional growth. 	5 4 3 2 1	Low Med High
Graduation rates	<ul style="list-style-type: none"> School develops well-structured plan for all students to complete high school graduation requirements in a timely manner (based on school design). 	5 4 3 2 1	Low Med High
College credit and degrees	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop a well-structured plan for all students to complete a course of study that satisfies high school requirements and provides up to two years of transferable college credits or an Associate's degree. 	5 4 3 2 1	Low Med High

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
		5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Whether site is on or off campus, the school, postsecondary partner, and key stakeholders promote college-going culture in school and college-going aspirations in students, e.g., orientation activities, college IDs, access to facilities, seminars on campus, mentoring or tutoring programs. 	1	High
Location	<ul style="list-style-type: none"> School, postsecondary partner, and intermediary identify classroom and administrative space on college campus. If site is off campus, school, intermediary, and postsecondary partner ensure that separate and adequate classroom and administrative facilities are provided on campus. 	5 4 3 2 1	Low Med High
Student recruitment and selection	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop a recruitment plan that identifies district or other parameters, is specific and appropriate to reach targeted students as described in the ECHS Core Principles, identifies selection criteria to be communicated to the community, and involves middle school counselors, community organizations, and other key stakeholders. 	5 4 3 2 1	Low Med High
Teacher retention	<ul style="list-style-type: none"> School leader, postsecondary partner, and key stakeholders articulate a strategy to recruit and retain teachers that incorporates: <ul style="list-style-type: none"> Job descriptions and requirements, e.g., extensive content knowledge, demonstrated success with target population; Peer mentoring program; Professional learning community, e.g., common planning time; and Professional development opportunities. School leader, postsecondary partner, and key stakeholders recruit highly qualified secondary and postsecondary faculty who possess extensive subject knowledge and who have demonstrated success working with the target population. 	5 4 3 2 1	Low Med High

Early college high schools provide comprehensive student supports based on students' academic and social needs.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Personalization	<ul style="list-style-type: none"> The school, postsecondary partner, and key community stakeholders articulate a student support strategy that includes: Academic supports based on quantitative and qualitative data, e.g., faculty support, mentoring, tutoring, summer bridge programs; Advising supports based on qualitative and quantitative data, e.g., advisories, guidance and counseling, individual learning plan. The student support strategy specifies how each student will be known well by faculty and staff. School leader, partner, and key stakeholders identify agencies that provide services to students that are unavailable in the school, e.g., health clinic, DSS, DYS, DMH. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High Low Med High
Respect, responsibility, and safety	<ul style="list-style-type: none"> School involves all stakeholders in developing a culture of respect and responsibility that involves older students as mentors for entering students. School community develops a handbook with clear discipline policies and consequences to distribute and discuss with students, staff, and families. The school develops a process for hearing and responding to student voice. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
Transfer and articulation plans	<ul style="list-style-type: none"> School, in concert with postsecondary partner and key stakeholders, develops a plan for a smooth transition from high school to college that includes: <ul style="list-style-type: none"> Identification of transferable courses, articulation options, and requirements to enter public postsecondary institutions; Methods to assist students and families to complete college applications, apply for financial aid (FAFSA); Preparation of students for college-entrance exams, e.g., SAT, ACT, Accuplacer; Strategies to acclimate students to the support services available at college. 	5 4 3 2 1	Low Med High

Early college high schools demonstrate effective instructional practices.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Curriculum and instruction	<ul style="list-style-type: none"> School leader, postsecondary partner, high school and college faculty, and key stakeholders understand college expectations, state and district performance standards, and the intermediary's benchmarks. School leader and high school and postsecondary faculty align their curricula. School leader and high school and postsecondary faculty identify effective instructional strategies based on research to meet a wide range of student needs; e.g., differentiated instruction, scaffolding, project-based learning, technology integration. School leader and high school and postsecondary faculty use student data and research to understand the challenges of preparing targeted students for success in a rigorous academic program, including college courses. School leader and high school and postsecondary faculty define literacy and numeracy as school-wide initiatives and choose instructional strategies that reinforce that commitment, e.g., writing to learn, literacy across the content areas. School leader and high school and postsecondary faculty determine how to appropriately integrate technology into instruction. School leader, high school and postsecondary faculty, and key stakeholders identify appropriate culturally-sensitive materials for target population. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High Low Med High Low Med High
	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty develop procedures to use data on entering students to identify strengths and needs, plan programs, and design professional development. School leader and high school and postsecondary faculty review variety of diagnostic and standardized assessments available and select one(s) to meet their needs. School leader and high school and postsecondary faculty identify processes that enable students to assess their own learning. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty develop a process to gather and analyze performance data consistently and regularly across the school to inform instruction and professional development. School leader and high school and postsecondary faculty develop a process and structure to align curriculum, instruction, and assessment with college expectations. Schools select instruments to survey all stakeholders' satisfaction with school culture, student support, professional development, parent and community participation, and other aspects of the school. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
Student assessment			
Continuous improvement			

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Professional development	<ul style="list-style-type: none"> School leader, high school faculty, and postsecondary partner design a professional development plan, based on data on incoming students and needs of teachers that is embedded in the school, allows for ongoing collaborative learning, and provides ongoing support to teachers to implement effective, alternative instructional strategies. School develops a schedule that provides common planning time for teachers. School leader and intermediary identify professional development providers. School leader and high school and postsecondary faculty have a common professional development experience before school opens, e.g., establishing a common vision; developing curriculum that aligns high school and college expectations; identifying a range of student supports; addressing data analysis, research-based instructional strategies, and classroom management strategies; developing a common process for cross-classroom visitations. 	5	Low
		4	Med
		3	High
		2	
		1	
		5	Low
		4	Med
		3	High
		2	High
		1	High

Early college high schools establish and institutionalize strong secondary/postsecondary partnerships to ensure student success.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Collaborative leadership	<ul style="list-style-type: none"> University/college president and board identify early college high school's value to the university/college. Postsecondary partner (e.g., provost, deans, assistant to the president, faculty) is an integral part of the planning team for the early college high school. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Intermediary facilitates a multi-year Memorandum of Understanding, charter, or agreement between secondary and postsecondary institutions that outlines essentials, such as: <ul style="list-style-type: none"> Mission and goals based on the ECHS Core Principles; Academic plan for achieving up to two years of college credit; Roles and responsibilities of all entities; Staffing; Use of facilities; Student support; Professional development; Pre-requisites for enrollment in college courses; Payment of fees, tuition, books, liability, transportation, and food. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School and postsecondary partner identify a person(s) to coordinate, plan, and scaffold activities to ensure a smooth transition for students. School leader and postsecondary partner introduce representatives of academic departments to the mission of the early college high school. 	5 4 3 2 1	Low Med High

Early college high schools engage students, parents, community, business, and public agencies in developing and sustaining the schools.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Leadership	<ul style="list-style-type: none"> School leader includes all stakeholders in establishing vision and mission of the school. School leader designs and conducts informational meetings with postsecondary partner to make explicit the need/desire for community involvement. School leader, postsecondary partner, and key stakeholders encourage business partnerships and involvement of policymakers to ensure sustainability. School leader involves all necessary district/postsecondary partners in school design to ensure plan for completion of two years of college credit. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High
Outreach and recruitment	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders develop postsecondary, family, and community outreach and student recruitment materials that clearly convey school mission, organization, and design. School, partner, and key stakeholders reach out to postsecondary community through forums, town meetings, and orientation sessions to communicate and develop buy-in related to school mission and goals. 	5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High
Parental/ family involvement	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders, develop a process for parental involvement including ways to introduce families and parents/ guardians to the school and to provide ongoing opportunities for input regarding school development. 	5 4 3 2 1	Low Med High
Community engagement	<ul style="list-style-type: none"> School and postsecondary partner, in concert with key stakeholders, develop a process for community engagement to introduce community partners to the school and provide ongoing opportunities for input regarding school development, e.g., informational meetings, town meetings, forums. School leader, postsecondary partner, and key stakeholders encourage business partnerships and involvement of policymakers to ensure sustainability. Governance committee develops a process to gather data on the number and types of involvement of community members, business partners, and policymakers. Governance committee begins to design a report to stakeholders that includes data on student performance, attendance, persistence, and annual surveys of stakeholders' satisfaction. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High

Early college high schools develop plans for long-term sustainability.

BENCHMARK	BEGINNING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Policy	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders identify and engage key interest groups, lawmakers, and regulatory bodies to educate them about the promise of ECHS and its policy needs. School, postsecondary partner, intermediary, and key stakeholders identify barriers, e.g., funding, teacher certification, college access, dual credit. School, postsecondary partner, intermediary, and key stakeholders identify and begin to seek needed waivers and conduct negotiations with state and local entities/agencies. School, postsecondary partner, intermediary, and key stakeholders cooperate with other ECHS intermediaries and networks working in the state, when applicable. 	<p>5 4 3 2 1</p> <p>5 4 3 2 1</p> <p>5 4 3 2 1</p> <p>5 4 3 2 1</p>	<p>Low Med High</p> <p>Low Med High</p> <p>Low Med High</p> <p>Low Med High</p>
Financing	<ul style="list-style-type: none"> Secondary, postsecondary partners, intermediary, and key stakeholders develop five-year budget including start-up costs and projection of actual costs for items such as: <ul style="list-style-type: none"> School planning; Implementation of ECHS Core Principles and seven attributes of early college high schools; Curriculum development; Transportation; Secondary/postsecondary collaboration; Instructional design; Staffing; Supports to meet students' academic and personal needs; Inclusion of two years of "free" college credits, fees, and books. Budget includes grants; local, state, and federal funding; revenue streams; and philanthropic donations. 	<p>5 4 3 2 1</p> <p>5 4 3 2 1</p>	<p>Low Med High</p> <p>Low Med High</p>
Long term school sustainability	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders engage institutional partners, community, business, public officials, and others in investigating options and opportunities for financing the long-term costs of the school. 	<p>5 4 3 2 1</p>	<p>Low Med High</p>

Benchmark Tool for Early College High Schools: Implementation Phase

Students completing early college high schools graduate with a high school diploma and up to two years of college credit.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Student attendance	▪ School, postsecondary partner, and key stakeholders track and quantify attendance of students in high school and college.	5 4 3 2 1	Low Med High
	▪ School, postsecondary partner, and key stakeholders adjust and refine their strategy in order to improve student attendance rate in each subsequent year.	5 4 3 2 1	Low Med High
Student persistence	▪ School, postsecondary partner, and key stakeholders track and quantify data on persistence of students.	5 4 3 2 1	Low Med High
	▪ School, postsecondary partner, and key stakeholders adjust and refine their strategy to improve the retention rate of each cohort in subsequent years.	5 4 3 2 1	Low Med High
Graduation rates	▪ School annually tracks cohorts to ensure that students are on schedule to graduate.	5 4 3 2 1	Low Med High
	▪ School utilizes and adjusts plan to continually increase the number of students who are on schedule to graduate in each subsequent year.	5 4 3 2 1	Low Med High
College credit and degrees	▪ School utilizes and adjusts plan to continually ensure that students are on schedule to graduate with up to two years of college credit or an Associate's degree.	5 4 3 2 1	Low Med High

Early college high schools establish the enabling conditions necessary to prepare students for success in a rigorous, well-structured academic program leading to high school graduation and up to two years of college credit.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Mission	<ul style="list-style-type: none"> School revisits mission annually with parents/guardians, students, high school and postsecondary faculty, and community members to renew, adjust, and reinforce. 	5 4 3 2 1	Low Med High
Leadership	<ul style="list-style-type: none"> School leader, postsecondary partner, and key stakeholders make explicit the goal of up to two years of college credit and how to accomplish that goal. School leader and partners share and use research-based information on underprepared students. School leader and partners collect, analyze, and share data on improved student performance. School has the necessary autonomies, e.g., it controls budget, staffing, curriculum, schedule, student data, and professional development. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High Low Med High
School culture and design	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders implement school design plan, with full regard to school's mission and the seven attributes of early college high schools: <ul style="list-style-type: none"> Common focus on research-based goals and intellectual mission; Shared, clear, high expectations and standards, with all students completing a coherent, rigorous course of study; Small, personalized learning environments with no more than 400 students per high school (Early college high school may also link with feeder elementary and middle schools); Respect and responsibility among students, among teachers, and between students and teachers; Time for teachers/staff to collaborate and for the inclusion of parents and the community in an education partnership; Emphasis on performance, with students promoted based on demonstrated competency; Technology used as a tool for designing and delivering engaging and imaginative curricula. School, postsecondary partner, and key stakeholders assess effectiveness of and refine components of school design plan to ensure improved student performance in subsequent years. School and postsecondary partner continue to promote a college-going culture through a variety of activities on campus, assess the activities' effectiveness, and refine them to ensure an increase in the number of graduates who enter college. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
Location	<ul style="list-style-type: none"> School and postsecondary partner (with intermediary, if necessary) regularly review and negotiate space needs. 	5 4 3 2 1	Low Med High
Student recruitment and selection	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders collect and analyze data on student population and regularly refine recruitment plan to ensure fidelity with ECHS Core Principles. 	5 4 3 2 1	Low Med High
Teacher retention	<ul style="list-style-type: none"> School leader, postsecondary partner, and key stakeholders collect data on teacher recruitment and retention, assess the effectiveness of their strategy, and refine it as needed. 	5 4 3 2 1	Low Med High

Early college high schools provide comprehensive student supports based on students' academic and social needs.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Personalization	<ul style="list-style-type: none"> School leader and teachers identify students and families in need of support services, refer them to services, and track effectiveness of those services. Faculty and staff continuously improve student support through assessment of formative data, student outcomes, and data from annual surveys of stakeholders. School, partner, and key stakeholders regularly review and refine the student support strategy to ensure that the needs of students and families are met effectively. The school has the capacity to address students' needs and interests. Each student receives customized academic support and advising to achieve college goals. 	5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
Respect, responsibility, and safety	<ul style="list-style-type: none"> School leader and faculty identify and share effective classroom management strategies. Discipline referrals, suspensions, and expulsions are tracked and recorded, and are considerably lower than district average. School leader, high school and postsecondary faculty, and students revise handbook to reflect college policies and expectations. Student voice informs culture, e.g., student organizations, forums, presentations, mentoring, advising. 	5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
Transfer and articulation plans	<ul style="list-style-type: none"> School develops a post-graduation plan for each student that includes continuing education, and school and postsecondary faculty assist student and family to complete applications and financial aid forms. School staff, students, and families have a clear understanding of transfer policies and requirements for the state's public postsecondary institutions. College identifies a counselor for high school students, who works with high school faculty and guidance counselors, to ensure a smooth transition. School arranges and encourages visits to different colleges and debriefs visits with students. 	5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High
		5 4 3 2 1	Low Med High

Early college high schools demonstrate effective instructional practices.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Curriculum and instruction	<ul style="list-style-type: none"> High school and postsecondary faculty, students, and key stakeholders are knowledgeable of college expectations, state and district performance standards, and intermediary's benchmarks. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> High school and postsecondary faculty assess the alignment of high school and postsecondary curriculum and refine, when necessary. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty regularly review and discuss proven instructional practices that inform their teaching, analyze student outcome data, and adapt their practice as needed. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> High school and postsecondary faculty use instructional strategies to simultaneously address basic needs and accelerate student learning, e.g., differentiated instruction. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Content area and postsecondary faculty include significant amounts of reading and writing in their classes. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> All students have access to technology that supports and enhances learning. High school and postsecondary faculty provide culturally-competent instruction and use culturally-sensitive materials that affirm and build on students' background. 	5 4 3 2 1	Low Med High
Student assessment	<ul style="list-style-type: none"> Schools schedule specific times during the school day and year for faculty to meet to review and discuss evidence of improved student performance. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School uses multiple forms of assessment (teacher-made tests, standardized tests, performance based assessment, portfolios, exhibitions) to evaluate student progress and to target instruction. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Students have opportunities to assess their own learning and that of their peers using self-assessments and rubrics. 	5 4 3 2 1	Low Med High
Continuous improvement	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty refine their data-driven process to result in improved student performance and more targeted professional development. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School leader and high school and college faculty assess effectiveness of secondary/postsecondary alignment based on improved student performance. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School conducts annual surveys of all stakeholders and uses results to inform academic practices at the school. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School conducts ongoing research on the efficacy of school design using indicators including attendance, persistence, discipline, standardized test scores, course taking and credit attainment, quality and effectiveness of student supports. 	5 4 3 2 1	Low Med High

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Professional development	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty annually refine the school's professional development plan based on student outcome data and teachers' needs. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Common planning time during the day is used for embedded professional development for high school teachers and postsecondary faculty, e.g., looking at student work, sharing learning from workshops and conferences, discussing current research on teaching and learning. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School leader and high school and postsecondary faculty identify professional development needs and suggest professional development opportunities or consultants to address those needs. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Secondary and postsecondary faculty observes each other's classrooms, provide feedback, and share effective pedagogy. 	5 4 3 2 1	Low Med High

Early college high schools establish and institutionalize strong secondary/postsecondary partnerships to ensure student success.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Collaborative leadership	<ul style="list-style-type: none"> Partner continues to be a member on the decision-making body for the early college high school, e.g., helping to determine direction of the school, continuing to support the partnership. 	5 4 3 2 1	Low Med High
Agreements	<ul style="list-style-type: none"> Secondary, postsecondary partner, and intermediary review periodically and renew commitment to an MOU, charter, or agreement. 	5 4 3 2 1	Low Med High
Planning and coordination	<ul style="list-style-type: none"> College liaison coordinates joint activities and is responsible, with high school and postsecondary faculty, for the social and academic transition of students to meet the challenges of college-level work. Postsecondary academic departments are encouraged to be engaged in ongoing curriculum and instruction planning with high school faculty. 	5 4 3 2 1	Low Med High

Early college high schools engage students, parents, community, business, and public agencies in developing and sustaining the schools.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Leadership	<ul style="list-style-type: none"> School leader moves to distributed leadership to involve stakeholders in meaningful work with the school to improve student performance. Informational meetings become basis for continued involvement with the school and students. School leader works with postsecondary faculty to facilitate clear expectations for future work with students. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
Outreach and recruitment	<ul style="list-style-type: none"> School, postsecondary partners, and key stakeholders use, assess effectiveness of, and refine community outreach and recruitment materials. School, postsecondary partners, and key stakeholders reinforce the school's mission and goals within the school and postsecondary institution through forums, open houses, orientation meetings, retreats, and school conferences. 	5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High
Parental/ family involvement	<ul style="list-style-type: none"> School, postsecondary partner, and key stakeholders quantify the frequency and types of participation by parents/ guardians, analyze data, and refine their parental/family involvement process. Parents, families, and guardians are regularly engaged in meaningful academic tasks, such as reviewing and discussing student work, portfolios, and assessments. School offers opportunities for parents, guardians, and families to strengthen their role in promoting their student's academic and social success, e.g., conversations about college expectations, ways to help with homework. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High
Community engagement	<ul style="list-style-type: none"> Business and community organizations provide support to school, e.g., mentors, tutors, scholarships, career counseling, grants, and technology. School leader and high school faculty work with business partners and other stakeholders to design opportunities for students beyond the classroom walls, e.g., internships, community service, jobs. Governance committee tracks business and community involvement, e.g., types of involvement, levels of success. The governance committee regularly reports to business and other community stakeholders regarding school progress, expanded to ultimately include college-going data. 	5 4 3 2 1 5 4 3 2 1 5 4 3 2 1 5 4 3 2 1	Low Med High Low Med High Low Med High Low Med High

Early college high schools develop plans for long-term sustainability.

BENCHMARK	IMPLEMENTING PHASE	LEVEL OF PRACTICE (5 = most visible)	PRIORITY
Policy	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders conduct ongoing education campaign of key policymakers and interest groups, e.g., invite policymakers to visit schools, meet with local legislative staff, and present at conferences. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders generate and act on plans for overcoming identified barriers, e.g., seeking needed waivers and conducting negotiations with state and local entities/agencies. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders develop and carry out advocacy strategies for meeting longer-term ECHS policy and financing needs. 	5 4 3 2 1	Low Med High
	<ul style="list-style-type: none"> Schools, postsecondary partner, intermediary, and key stakeholders continue to cooperate with other ECHS intermediaries and networks working in the state, when applicable, to meet long-term ECHS policy and financing needs. 	5 4 3 2 1	Low Med High
Financing	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, and key stakeholders review, revise, and identify issues and five-year budget based on actual costs and revenue, brainstorm options, and pursue most viable ones. 	5 4 3 2 1	Low Med High
Long term school sustainability	<ul style="list-style-type: none"> School, postsecondary partner, intermediary, community, business, public officials, and others specify and implement plans for financing the long-term costs of the school, e.g., a scholarship fund, long-term agreements for free or discounted tuition and fees, use of per pupil allocations to pay for college and school cost, establishment of a foundation to support the school. 	5 4 3 2 1	Low Med High

Appendix G

Notification Letter of Addition of Selected College Readiness Measures

September 26, 2009



Faculty and Staff:

We would like to inform you about a pilot to add selected tests and scores for use in determining the college readiness and placement of students enrolling in credit college courses. In addition to Accuplacer, the minimum score identified on the chart below for the following tests: TAKS, ACT, SAT, PSAT, PLAN will be used for placement in the first college level course only. The Texas Higher Education Coordinating Board (Texas Administrative Code Title 19 Part 1 Chapter 4 Subchapter C rules 4.54, 4.57 and 4.85) identifies these tests and scores as measures of college readiness and as meeting the Texas Success Initiative. A number of Texas community colleges and universities also use these tests and scores to place students in college level courses and have found them to be effective predictors of student success.

Students who have the minimum scores on the tests, as listed below, are eligible to enroll in the entry college level course. For writing, these scores place the student in ENGL 1301. For math, these scores place the student in MATH 1314, 1324, 1332, and Math 1333. For reading, these scores allow a student to enroll in any other entry level college course.

Students who have scores lower than the recommended scores shown below must take the Accuplacer for placement.

El Paso Community College will assess the performance of students placed into college level classes based on the scores below at the conclusion of the Spring 2010 semester. It is anticipated that our students will perform as well as students at Austin Community College and Dallas Community College who are placed into college level courses with these additional placement scores, which have been shown to predict student success just as well as Accuplacer scores.

We hope your fall semester is progressing well.

Dr. Richard Rhodes

Dr. Dennis Brown

Additional Test Scores for Placement

- TAKS*:

- 10th Grade-minimum 2200 on math and/or 2200 on English Language Arts with a score of at least 3 on writing subsection
- 11th Grade exit-minimum scale score 2200 on Math and/or English Language Arts with a minimum writing score of 3
- For Career and Technical Courses-minimum high school passing standard on Math and/or English Language Arts (2100)

- ACT**: Composite of 23 with minimum of 19 on English and/or math tests
- SAT**: Combined verbal and math score of 1070 with a minimum of 500 on verbal and/or math tests
- PSAT**: Combined score of 107 with minimum of 50 on critical reading and/or math
- PLAN**: Composite score of 23 with 19 or higher in math and English

* valid for 3 years from date of testing

** valid for 5 years from date of testing

Appendix H
Distinguished Achievement ECHS Program @ TM and
Associate Degree document

College & Career Readiness

Rigor **Relevance** **Relationships** **Results**

1

Build College and Career Ready Culture

- "No Excuses University"
(Bond Elementary School)
- Career Cruising
- College & Career Readiness
Plans

2

Establish Postsecondary Access for All

- Princeton Review
- PSAT for 10th graders
- ACT/SAT & ACCUPLACER
Preparation
- Go-Centers

3

Examine and Apply College Readiness Data

- 2200 TAKS Scores
- AEIS College Ready Graduates

4

Develop Strong College and Career Readiness Curriculum

- College Readiness Standards
- 4 x 4 Math
- 4 x 4 Science
- Dual Credit
- Advanced Placement
- Relevant Electives

5

Restructure Schools

- Advisory Periods –
6-12 grades
- Small Learning Communities
- 9th Grade Centers
- Programs of Study

Appendix I
Distinguished Achievement ECHS Program

		Comp-Engr			
DISTINGUISHED ACHIEVEMENT ECHS PROGRAM @TM and ASSOCIATE DEGREE					
9 th GRADE	Credit	core	Year 1 of College	Credit	
English I (ESOL I) Pre-AP E30300/31300	1				
Technology (BCIS) B32100/32200	1		BCIS 1305	3	
World Geog Pre-AP S10500/11500	1				
LOTE (varies w/lang chosen)	1				
AVID (elective)	1	*R	EDU 1300	3	
Biology Pre-AP	1				
Algebra I Pre-AP (M60400/61400) or Geom	1				
PE P05600	1				
Total	8			6	
10 th GRADE			Year 2		
English II (ESOL II) Pre-AP E32500/33500	1				
Speech E59000	0.5	*O	SPCH 1315	3	
Health P80000	0.5				
World Hist (S20000/21000)- or one semester	1	*O	HIST 2321 In Fall	3	
LOTE (varies w/lang chosen)	1				
AVID (elective)	1				
Chemistry	1	*R	SCIENCE	6 to 8	
varies with major, see chart			varies with major, see chart		
Algebra II or Geom Pre-AP (M63600/64600)	1				
Elective	0.5	*R	Fine Arts	3	
Total	7.5			15-17	
11 th GRADE			Year 3		
Eng III E34000/35000	1	*R	ENGL 1301	3	
US Hist (S030A0/040A0)	1	*R	HIST 1301/1302	6	
LOTE (varies w/lang chosen)	1	*O	SPAN 2311 or 2313	3	
Fine Arts A01000	1	*R	Arts, Dram, Muen, Musi, Danc - large selection avail	3	
AVID (elective)	1				
Science (see chart)	1		SCIENCE	6 to 8	
Alg II (M66600/67600) or College	1	*O	Math 1314/2412	7	
PE (varies)	0.5				
Total	7.5			28-30	
12 th GRADE			Year 4		
Eng IV E36000/37000	1	*R/O	ENGL 1302/2322	6	
US Govt or Govt elective	0.5	*R	GOVT 2305/2306	6	
LOTE (varies w/lang chosen)		*O	SPAN 2323	3	
Econ S31000	0.5	*O	ECON 2301	3	
(elective)	1				
Science (see chart)	1		SCIENCE	6 to 8	
Math - College	1	*O	MATH 2413/2314	7	
Elective	1		RESEARCH PROJECT	6	
Total	6			37-39	
Grand Total	29			86-92	
to graduate needs 26		no more than 60 credits transfer to University			
schedule will vary with student - must pass Accuplacer to start college classes					

Appendix J

Transmountain Early College High School Application for Admission



TRANSMOUNTAIN EARLY COLLEGE HIGH SCHOOL
Application for Admission
Students entering the ninth grade in the Fall of 2010

Submission deadline: January 8, 2010



Part I: School Overview

The Transmountain Early College High School is a unique educational opportunity provided through the collaboration of the El Paso Independent School District, the El Paso Community College, and the Texas High School Project of the Communities Foundation of Texas. This unique school is specifically designed to provide students with a rigorous course of study focused on a T-STEM (Texas~Science, Technology, Engineering and Math) model. Students attending the school will be provided advanced coursework that enables the student to attain an Associates Degree while completing his/her high school diploma. The school redefines the typical comprehensive high school experience into an academically oriented small school setting housed on the Transmountain campus of the El Paso Community College.

Part II: Applicant Information - (Please Print)

1. Name: _____
Last First Middle
2. Name you wish to go by: _____
3. Date of Birth: ____/____/____ *Gender: ☐ F ☐ M Student ID # _____
Month Day Year
4. Address: _____
Street Number and Name Zip Code
5. Home Phone: () _____ Parent/Guardian's Work Phone: () _____
Parent/Guardian's Cell Phone: () _____

Student's email address: _____
Parent/Guardian's email address: _____

Name of person with whom Relationship to you:
you reside: _____
6. *Has anyone in your immediate family received a college degree (i.e. brother, sister, mom, or dad)?
☐ No ☐ Yes If yes: What is the highest degree achieved? _____
7. *Are you currently in the AVID program at your middle school? ☐ No ☐ Yes
8. T-shirt size: ☐ XX-Large ☐ X-Large ☐ Large ☐ Medium ☐ Small
9. Student's Signature: _____ Date: _____
10. Parent/Guardian's Name _____
Please Print
11. Parent/Guardian's Signature: _____ Date: _____

**Information needed for grant reporting purposes only - not for admission.*

Part II: Applicant Information

1. Name: Last First Middle

2. Name you wish to go by:

3. Date of Birth: Student ID #

4. Address: Apt#:

City State Zip code

5. Home Phone: Parent/Guardian's Work Phone:

Parent/Guardian's Cell Phone:

Student's email address:

Parent/Guardian's email address:

Name of person with whom you reside:

Relationship to you:

6. *Has anyone in your immediate family received a college degree (i.e. brother, sister, mom, or dad)?
Yes or No If yes: What is the highest degree achieved?

7. *Are you currently in the AVID program at your middle school? Yes or No

8. T-shirt size: XX-Large, X-Large, Large, Medium, Small

9. Student's Signature: Date:

10. Parent/Guardian's Signature: Date:

**Information needed for grant reporting purposes only - not for admission.*

Part III: Current School Information

11. Name of Current School: School Phone:

12. Counselor's Name:

Part IV: Student Responses

13. If one of your friends asked you to explain why you want to attend the Transmountain Early College High School, what would you tell him/her?

Part III: Current School Information

12. Name of Current School: _____ School Phone: () _____
13. Counselor's Name: _____

Part IV: Student Responses
Please answer the following questions in your own handwriting

14. If one of your friends asked you to explain why you want to attend the Transmountain Early College High School, what would you tell him/her?

15. An Early College High School offers/requires coursework that is a combination of both high school and college courses in a college setting. Explain why you feel prepared to handle this type of educational experience.

Part IV: Student Responses (continued)
Please answer the following questions in your own handwriting

16. Explain some of the things your teachers do that help you to be successful in school.

Part V: Parent Responses
Please answer the following questions

17. What support mechanisms do you feel your child would need in order to be successful in the Early College High School setting?

Part V: Parent Responses (continued)
Please answer the following questions

18. What do you see as your child's greatest strength?

19. What do you expect from your child's experience in the Transmountain Early College High School?

Part VI: Applicant Criteria, Important Information and Selection Process

The criteria for selecting students for admission into the Transmountain Early College High School are as follows:

- The applicant must reside in the El Paso Independent School District.
 - The applicant must meet the requirements for promotion from eighth grade to ninth grade (including 90% attendance, grades – 70% overall GPA in core subjects, mastery on the first test administration of the Spring 2010 TAKS Math/Reading tests).
 - The applicant must have completed all portions of the application for admission.
 - The applicant and parent/guardian must go through an interview process with the administration of the Transmountain Early College High School.
 - The applicant must attend a two-week Summer Bridge Program in June of 2010.
 - The applicant must have submitted the application for admission to his/her middle school counselor or TMECHS principal by the deadline of January 8, 2010 (Applications received after the deadline will be accepted, but will be placed on a waiting list). If the application is submitted electronically, the typed name of the student and/or parent will be considered the equivalent of a signature.
-
- While attending the Transmountain Early College High School, if the student experiences issues with attendance, tardies, discipline, low grades due to lack of effort, or lack of parent/guardian cooperation, the administration reserves the right to recommend that the student be dropped from the Transmountain Early College High School and returned to his/her home campus.
 - The applicant and guardian must be aware that the Transmountain Early College High School does not have lockers; therefore, the applicant is required to carry his/her books/supplies, etc.
 - Roundtrip transportation is only provided from the applicant's home campus. The applicant is responsible for getting to/from his/her home school.
-

The process for selecting students for admission into the Transmountain Early College High School is as follows:

- A random lottery process, conducted by the District's Internal Audit Department, will be used to select the students for admission if more than 125 qualified students apply.
- A total of 125 students will be admitted.

Reminder: Turn in the completed application to your middle school counselor or TMECHS principal by January 8, 2010.

The El Paso ISD does not discriminate in its educational programs or employment practices on the basis of race, color, religion, sex, national origin, age, disability, military status, or on any other basis prohibited by law. Inquiries concerning the application of Title VI, VII, and IX, and Section 504 may be referred to the district compliance officer, Vince Sheffield, at 881-2619; 504 inquiries regarding students may be referred to Cecilia Whiteman at 881-2527.

El Distrito Escolar Independiente de El Paso no discriminará en los programas de educación o en prácticas de empleo usando el criterio de raza, color, religión, sexo, origen nacional, edad, incapacidad, estado militar, u otra práctica prohibida por la ley. Preguntas acerca de la aplicación de los títulos VI, VII o IX, y la Sección 504 pueden ser referidas al oficial del distrito, Vince Sheffield al 881-2619; preguntas sobre 504 tocante a estudiantes pueden ser referidas a Cecilia Whiteman al 881-2527.

Appendix K
Institutional Review Board (IRB) Proposal

I. Title:
Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas

II. Investigators:
Virginia Heidemann
Doctoral Candidate,
Educational Leadership and Foundations
University of Texas at El Paso

III. Hypothesis, Research Questions, or Goals of the Project:

My goal is to evaluate how Early College High School Initiative (ECHSI) policy is translated in implementation at the Transmountain Early College High School (TMECHS) in El Paso, Texas with a focus on academics. Contexts and interrelationships among various levels of administration and staff, external and internal politics, school design, and school culture will be considered in analysis of data.

IV. Background and Significance:

TMECHS opened in August 2008 and is beginning its second year at the time of this proposal. ECHSI policies for the school were first decided on and then written into official documentation based on the core values and criteria in the policy, federal and state public school and higher education requirements, El Paso Independent School District (EPISD) policies, and El Paso Community College (EPCC) policies. TMECHS is then organized and run based on interpretations of policy by local partners and administrators, on organizational and cultural constraints, and on a variety of ongoing and reflective decisions. Processes are led by individuals in positions of authority

and carried out by staff and faculty (*Early College High School Initiative*, 2009).

Partners, administrators, staff, and faculty associated with TMECHS could benefit from an evaluation of their experiences. Knowledge and insight revealed may help guide them in the school's development and improvement in key areas. Insight gained from a qualitative study may not only be beneficial to stakeholders of TMECHS in El Paso, but may also be useful for those involved in other El Paso early college high schools and the initiative nationwide, as well as other secondary schools. If policy implementation does not match policy documentation in its ideal formulation, evaluation of that implementation may serve to illuminate why changes have occurred or even provide evidence that policy modification would be beneficial within the dynamics of a the new school settings that early college high schools represent. If successful methods and strategies are identified, documented, and then proven replicable, TMECHS programs and practices may serve as exemplary models for other schools.

ECHSI core values and criteria direct early college high school partners and administrators to provide a rigorous, academic education and college preparation for those who might otherwise not pursue and achieve that goal. The initiative enhances this goal by accelerating the pathway to a college education for those underserved and underrepresented for whom the financial burdens of a college education can be prohibitive. Because ECHSI policy redesigns high schools to incorporate up to two years of college

coursework, two previously distinct branches of the education pathway, secondary schools and institutions of higher education are merged into one, with teenagers taking college classes while still in high school (*Early College High School Initiative*, 2009). As ECHSI merges these two institutions and their missions, the dynamics of those mergers and their impact on implementation is worthy of investigation.

V. Research Method, Design, and Proposed Statistical Analysis:

I will conduct a case study guided by a co-construction perspective, taking into account interrelationships among actors and contexts in a multi-directional framework. As I interview actors at several levels of school administration I will be cognizant of how "multiple levels of educational systems may constrain or enable implementation" and how "that implementation may affect those broader levels" (Datnow, 2006, p. 107). While there have been studies conducted on the implementation of ECHSI in El Paso and nationwide, I have not found evidence of implementation research having been conducted in this manner at TMECHS in El Paso, Texas.

To investigate policy formulation, documentation, and implementation I will first review policy documentation, such as approved applications to the Texas Education Agency (TEA) under the authority of Texas Education Code and Texas Administrative Code, and then conduct interviews begun with questions regarding policy formulation and policy implementation (Texas

Early College High School, 2009). Several factors will be taken into account as I conduct research and evaluate findings, including policy goals, external and internal politics, interrelationships among contexts and various levels of administration and staff, school design, and school culture. My main policy focus will be academics, what happens when aspects of policy specific to academics are formulated, put into practice, and ultimately translated in implementation at the local level, in the school.

Policy documentation and interviews with high-level administrators will provide representations of the ideal, policy as directed and expected, while the data I collect from interviews with administrators and staff at various levels in the school's organizational hierarchy will reveal how that policy was decided upon and formulated, and actual policy implementation. Review of written policy and interviews will first establish a comprehensive understanding of the scope, breadth, and specificity of policy and will guide me in the interview process and in the analysis of research findings. Analyses of information gathered at the school from various personnel at different levels of administration will then be compared. Comparison of information will "allow for greater opportunity to generalize across several representations of the phenomenon", while helping to establish conditions and context. (Miles & Huberman, 1994, p. 51; Glaser & Strauss, 1967, p. 55; Yin, 1984, p. 108; Borman, Clarke, Cotner, & Lee, 2006, p. 123)

Guiding Questions are:

- How are Core Principles of ECHSI written as policy with regard to academics for the schools in El Paso via mechanisms such as

D. Research Protocol. Attached is a copy of topics and sample questions for the non-structured interviews I plan to conduct. I will offer to meet with interviewees at their offices or another convenient location, i.e. a conference room of their choosing. Interviews may take an hour or more, depending on conversation prompted by my questions.

Interviews will be tape recorded and later transcribed. All interviewees will be provided a copy of the applicable interview transcript to review and amend if they see fit. Transcribed interviews may also prompt follow-up interviews that will also be taped, transcribed, and provided to the applicable interviewee for review and advice.

E. Privacy and Confidentiality of Participants. Because many of these administrators hold positions unique to them and because discussions may often include references to administrative positions and identities, potential interviewees will be given the opportunity to decline participation. When a potential interviewee agrees to participate, during discussion prior to signing informed consent, he or she will be given the option to not allow any reference to his or her name or position in the write-up of findings. This option will be documented in the informed consent. In addition, any participant has the option to discontinue an interview at any time and take him or herself out of the study at any time.

F. Confidentiality of the Research Data. Tapes and transcriptions of taped interviews will be stored in a locked cabinet in a locked room in my

house. Once the study is completed, tapes and documentation will be destroyed. Computerized documents will be maintained in files protected by passwords. All files and documents will be coded so that no personally identifying information is visible on them.

G. Research Resources. I am the only researcher involved in this project.

All contact, correspondence, interviews, and interview transcription will be conducted by me. Outside of actual interviews, transcription, data analysis, and writing will be conducted in my home.

VII. Potential Risks. The interviews present no risk of harm to the individuals.

Participants have the option of not answering any question and of terminating an interview at any time. In addition, if a participant requests, he or she may withdraw from the study at any time.

VIII. Potential Benefits. Potential benefits include information that may help

TMECHS partners, administrators, and staff better direct, organize, and run TMECHS. Information revealed may also be useful for administrators and staff and other schools in El Paso, Texas and nationwide.

IX. Sites or Agencies involved in the Research Project. Besides the IRB with the University of Texas at El Paso (UTEP), I will be submitting requesting approval letters to conduct my research from the Texas Education Agency (TEA), the El Paso Independent School District (EPISD), and the El Paso Community College (EPCC).

X. Review by another IRB. I will submit an IRB to EPCC.

References

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Appendix L
Informed Consent

University of Texas at El Paso (UTEP) Institutional Review Board

Informed Consent Form for Research Involving Human Subjects

Protocol Title: Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas

Principal Investigator: Virginia Heidemann, Doctoral Candidate

UTEP: Educational Leadership and Foundations, University of Texas at El Paso (UTEP)

1. Introduction

You are being asked to take part voluntarily in the research project described below. Please take your time making a decision and feel free to discuss it with your friends and family. Before agreeing to take part in this research study, it is important that you read the consent form that describes the study. Please ask the principal investigator to explain any words or information that you do not clearly understand.

2. Why is this study being done?

The purpose of the research study is to evaluate academic policy implementation at the Transmountain Early College High School (TMECHS).

Approximately 16 administrators and staff members will be participating in this study from the Texas Education Agency (TEA) Texas High Schools Project, UTEP, the El Paso Community College (EPCC), the El Paso Independent School District (EPISD), and TMECHS.

You are being asked to be in the study because of your administrative role with TMECHS.

If you decide to participate in this study, your involvement will last about 3 months.

3. What is involved in the study?

I will interview partners, administrators, and staff of various levels at the TEA, UTEP, EPCC, EPISD, and TMECHS regarding academic policy formulation, documentation, and implementation. Interviews will be non-structured based on approximately ten open-ended questions and will be audio-taped for subsequent transcription. Interviewees will be provided transcripts of their interviews to review and amend if they see fit. Follow-up interviews will be scheduled on an

as-needed basis. In addition to interviews, policy documents will be reviewed to establish scope, breadth, and specificity of documented policy.

4. **What are the risks and discomforts of the study?**

The interviews present no risk of harm to participants. Participants have the option of not answering any question and of terminating an interview at any time. In addition, participants may withdraw from the study at any time.

5. **What will happen if I am injured in this study?**

The University of Texas at El Paso (UTEP) and its affiliates do not offer to pay for or cover the cost of medical treatment for research related illness or injury. No funds have been set aside to pay or reimburse you in the event of such injury or illness. You will not give up any of your legal rights by signing this consent form. You should report any such injury to Virginia Heidemann, Principal Investigator (915-491-0684) and to the UTEP Institutional Review Board (IRB) at (915-747-8841) or irb.orsp@utep.edu.

6. **Are there benefits to taking part in this study?**

There will be no direct benefits to you for taking part in this study; however, this research may provide a better understanding of how Early College High School Initiative (ECHSI) policy regarding academics is formulated, disseminating, and translated in implementation.

7. **What other options are there?**

You have the option not to take part in this study. There will be no penalties involved if you choose not to take part in this study.

8. **Who is paying for this study?**

There is no internal or external funding for this study.

9. **What are my costs?**

There are no direct costs to you, but you may be responsible for any incidental expenses, such as travel to and from the research site.

10. **Will I be paid to participate in this study?**

You will not be paid for taking part in this research study.

11. **What if I want to withdraw, or am asked to withdraw from this study?**

Taking part in this study is voluntary. You have the right to choose not to take part in this study. If you do not take part in the study, there will be no penalty.

If you choose to take part, you have the right to stop at any time. However, I encourage you to talk to the principal investigator so that she knows why you are leaving the study. If there are any new findings during the study that may affect whether you want to continue to take part, you will be told about them.

The researcher may decide to stop your participation without your permission, if she thinks that being in the study may cause you harm.

12. Who do I call if I have questions or problems?

You may ask any questions you have now. If you have questions later, you may contact Virginia Heidemann at (915-491-0684) or heideman@miners.utep.edu or her advisor, Dr. Rodolfo Rincones at (915-747-7614) or rrincones@utep.edu.

If you have questions or concerns about your participation as a research subject, please contact the UTEP Institutional Review Board (IRB) at (915-747-8841) or irb.orsp@utep.edu.

13. What about confidentiality?

Because your role in the operation of TMECHS may be referenced in the interview process, you have the option to remain anonymous or to specify whether you want only your position or your name and position to be divulged in analysis and findings. Place your initials in the boxes below to document your preference and what you agree to.

- I choose to remain anonymous
- I agree to allow my name to be referenced
- I agree to allow my position to be referenced

If at any time, you wish to withdraw your participation, you may. All records will be kept in a locked file cabinet in a locked room in the principal investigator's home. Computerized documents will be maintained in files protected by passwords. All files and documents will be coded so that no personally identifying information is visible on them.

14. Mandatory Reporting.

If information is revealed about child abuse or neglect, or potentially dangerous future behavior to others, the law requires that this information be reported to the proper authorities.

15. Authorization Statement.

I have read each page of this paper about the study (or it was read to me). I know that being in this study is voluntary and I choose to be in this study. I know I can stop being in this study without penalty. I will get a copy of this consent form now and can get information on results of the study later if I wish.

Participant Name: _____ Date: _____

Participant Signature: _____ Time: _____

Consent form explained/witnessed by Principal Investigator:

Printed Name: _____

Signature: _____

Date: _____ Time: _____

Appendix M
IRB Conditional Approval Letter

THE UNIVERSITY OF TEXAS AT EL PASO
Office of the Vice President for Research and Sponsored Projects
Institutional Review Board
El Paso, Texas 79968-0587
phone: 915 747-8841 fax: 915 747-5931

DATE: September 16, 2009

TO: Virginia Heidemann, BA, MA

FROM: University of Texas at El Paso IRB

STUDY TITLE: [129540-2] Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas

IRB REFERENCE #:

SUBMISSION TYPE: New Project

ACTION: CONDITIONALLY APPROVED

APPROVAL DATE: September 16, 2009

EXPIRATION DATE: October 7, 2009

REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this research study. University of Texas at El Paso IRB has **CONDITIONALLY APPROVED** your submission subject to the following conditions:

- Please provide UTEP IRB with letters of support/approval from Texas Education Agency, El Paso Independent School District, and El Paso Community College. (List approval conditions here.) in order to acquire full approval.
- You have 3 weeks from the date of this letter to submit your letters of support/approval to conduct research these locations to UTEP IRB for review and full approval.

Research activities in accordance with this submission may not begin until this office has received a response to these conditions, and issued final approval.

This study has received Expedited Review based on the applicable federal regulation.

If you have any questions, please contact the Institutional Review Board Office at 915-747-8841 or irb.orsp@utep.edu. Please include your study title and reference number in all correspondence with this office.

Appendix N

Letter of Support/Approval

El Paso Independent School District (EPISD)

October 14, 2009

Virginia Heidemann
7700 Yosemite Place
El Paso, Texas 79904

Dear Ms. Heidemann,

We have received your request to conduct research in the El Paso Independent School District. Congratulations, your study, *Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas*, has been approved. You will conduct the research at the Transmountain Early College High School under the endorsement of Principal Dianne Jones. Once the study is completed we would appreciate if you could send a copy of your findings to our department for our records. Thank you.

You have our best wishes for a successful continued study. Please contact me at (915) 881-2412 or email me at cperales@episd.org

Sincerely



Carlos Perales
Researcher

cc: Dianne Jones, Principal

Approved:


James Steinhauser, Assistant Superintendent

Appendix O

Letter of Support/Approval

El Paso Community College (EPCC)



El Paso Community College
P. O. Box 20500
El Paso, Texas 79998

Institutional Review Board (IRB)

October 1, 2009

Virginia Heidemann, BA, MA
Doctoral Candidate
Educational Leadership and Foundations
University of Texas at El Paso

Dear Ms. Heidemann:

Thank you for submitting your study entitled, Evaluation of Policy Implementation: Transmountain Early College High School); the IRB has determined that your study is approved.

Please keep in mind that the IRB Committee must be contacted if there are any changes to your research protocol. The number assigned to your protocol is 1068. Do not hesitate to contact the IRB Committee at (915) 831-2184 if you have any questions.

Best wishes for your research work.

Sincerely,

A handwritten signature in black ink, appearing to read 'Keith Pannell', is written over a horizontal line.

Keith Pannell
Chair, IRB

Appendix P

Letter of Support/Approval

Communities Foundation of Texas (CFT)



Communities Foundation of Texas
5500 Caruth Haven Lane
Dallas, Texas 75225-8146
214.750.4222 phone
214.750.4212 fax
www.thsp.org

November 2, 2009

Virginia Heidemann
7700 Yosemite Place
El Paso, Texas 79904

Dear Virginia Heidemann,

The Executive Committee of the Texas High School Project (THSP) at the Communities Foundation of Texas (CFT) has reviewed your request to conduct the investigation/research study titled *Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas*. The Executive Committee of THSP has agreed to support your request for study for up to one year, expiration date November 2, 2010. While the THSP does not have a formal Institutional Review Board (IRB), we reinforce the need for you to follow the conditions stipulated through your higher education institution's IRB and request that you inform the THSP point of contact on your study if any of the following conditions arise:

- Any potential or actual harm comes to any THSP grantee;
- Any changes in your research/study design; and
- Any extension beyond the expiration date.

THSP would also like to request a copy of your final study report and permission to share with our grantees and stakeholders. Best of luck as you conduct your study.

THSP Point of Contact:

Alma G. Garcia
5500 Caruth Haven Lane
Dallas, TX 75225
Ph 214-750-4104
Email AGarcia@cftexas.org

Sincerely,

Todd Foster
Director of Finance

All Students

College Ready.
Career Ready.
Life Ready.

Appendix Q
Letter of Support/Approval
Region XIII



REGION XIII
EDUCATION SERVICE CENTER

September 29, 2009

The University of Texas at El Paso
Office of the Vice President for Research and Sponsored Projects
Institutional Review Board
El Paso, TX 79968-0587
Phone: 915-747-8841
Fax: 915-747-5931

RE: IRB reference # 129540-2- Evaluation of Policy Implementation: Transmountain Early College
High School (TMECHS), El Paso, Texas
Conditional Approval.

Dear Virginia Heidemann, BA, MA:

ESC, Region XIII approves and supports you with regard to the research and interviewing Dr. Pam Tackett for that research on investigation of academic policy formulation, documentation, and implementation at the Transmountain Early College High School in El Paso, Texas.

If you have any question, please contact Education Service Center, Region XIII at 512-919-5334 or eileen.reed@esc13.txed.net

Sincerely,

Eileen Reed
Deputy Executive Director
ESC, Region XIII

Appendix R
IRB Full Approval Letter

THE UNIVERSITY OF TEXAS AT EL PASO
Office of the Vice President for Research and Sponsored Projects
Institutional Review Board
El Paso, Texas 79968-0587
phone: 915 747-8841 fax: 915 747-5931

DATE: November 3, 2009

TO: Virginia Heidemann, BA, MA

FROM: University of Texas at El Paso IRB

STUDY TITLE: [129540-3] Evaluation of Policy Implementation: Transmountain Early College High School (TMECHS), El Paso, Texas

IRB REFERENCE #:

SUBMISSION TYPE: Response/Follow-Up

ACTION: APPROVED

APPROVAL DATE: November 3, 2009

EXPIRATION DATE: November 2, 2010

REVIEW TYPE: Expedited Review

Thank you for your submission of Response/Follow-Up materials for this research study. University of Texas at El Paso IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This study has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years after termination of the project.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact the Institutional Review Board Office at 915-747-8841 or
office. . Please include your study title and reference number in all correspondence with this

CURRICULUM VITA

Virginia Heidemann was born and raised in New Jersey. She received a Bachelor of Arts in Germanic Languages and Literature from Rutgers University in 1983. Upon graduation, she pursued a career in International Marketing for over ten years, working for CBS/Fox Video in New York City and then Bristol Myers Squibb Company in New Jersey.

In 1996, she moved to El Paso, Texas and changed her career path to that of education. She began by teaching at the International Business College and the School for Educational Enrichment, and in 1999 secured employment with the Tutoring and Learning Center at the University of Texas at El Paso (UTEP) as coordinator and then assistant director. In 2000, she began teaching Writing classes part-time for El Paso Community College (EPCC). In May 2005, she received a Master of Arts in History from UTEP and added the teaching of history classes at EPCC and the freshmen seminar at UTEP to her part-time repertoire. She enrolled in UTEP's doctoral program in Educational Leadership and Foundations in 2006. In 2007, she became assistant director for UTEP's Writing Center. In 2008, she received her Texas Teacher Certification in high school social studies and was hired as a charter faculty member for the Transmountain Early College High School in Northeast El Paso.