

A STUDY OF HIGH SCHOOL DUAL ENROLLMENT
PARTICIPATION AT ALABAMA'S PUBLIC
COLLEGES AND UNIVERSITIES

by

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ABSTRACT

This case study explored dual enrollment program implementation and student participation at a public high school in Alabama. The study gathered current data to describe the salient actions and cultural beliefs that influence dual enrollment program participation. The findings help to better understand the institutional practices that attract students to participate in dual enrollment programs.

This study describes the process by which a high school generates student participation in dual enrollment programs and identifies its established institutional practices that lead to higher student participation. The findings described the noticeable actions and cultural beliefs that facilitated student participation. The following research questions provided the data needed to answer the overarching questions of this study:

- 1) What were the strategies the high school used to attract students to participate in dual enrollment programs;
- 2) How did the high school assist students in successfully completing dual enrollment programs; and
- 3) What challenges does the high school face in the implementation of dual enrollment programs?

DEDICATION

This dissertation is dedicated to my family. First, to my mother a strong woman who taught my siblings and me to trust in God as we travel life's journey. She believed in the transformative power of education, and as my first teacher encouraged me to eagerly pursue and obtain knowledge. Then, to my siblings who encouraged me to follow this dream and finish the course. Special thanks to them for also spending many hours proofreading papers. To my nieces and nephews: I dedicate this to you so you can see that this dream is also possible for you.

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LIST OF ABBREVIATIONS AND SYMBOLS

ACT	American College Testing
et. al	et alia
FAFSA	Free Application for Federal Student Aid
FSA ID	Federal Student Aid Identity
GED	General Equivalency Diploma
GPA	Grade Point Average
Inow	Information Now
K-12	Kindergarten through Twelfth Grades
LMS	Learning Management System
NCES	National Center for Education Statistics
Pre-K	Pre-kindergarten
SAT	Scholastic Aptitude Test
TAP	Teacher Advisor Program
U.S.	United States

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CHAPTER I:
INTRODUCTION AND RATIONALE

Introduction

Compared with other industrialized nations, the level of postsecondary credentials in the United States declined during the 20th century (Aronstamm-Young & Bae, 1997; Palmer, Davis, Moore, & Hilton, 2010; Carnevale & Rose, 2011). This decline in postsecondary credentials was most notably observed in technical fields and has impaired the nation's future ability to compete in the global marketplace. Policymakers recognize the need to adapt and improve the nation's ability to preserve the technical core competencies required to compete in a global environment. Nationwide, states are working to build competitive advantages around the core competencies necessary for the development of a globally competitive workforce.

To build the core competencies needed to compete in the global marketplace, American high school students are provided multiple avenues to postsecondary educational opportunities. The more popular early college pathways are Advanced Placement, dual enrollment, and career technical education. Each pathway offers cost savings to students and shorter times to postsecondary degree completion. Additionally, the various pathways allow high school students seamless movement between secondary and postsecondary systems (Karp & Hughes, 2008).

Typically, gifted and talented high school students participate in Advanced Placement courses, which include over 36-course offerings (Loveless, 2016). Students receive high school credits for passing the courses and are required to take special examinations to qualify for

college credits. Advanced placement exam scores permit students to skip college introductory classes and/or satisfy general education requirements. Colleges may offer both credit and placement based on a student's exam scores. Exam scores of three or higher often receive both college credit and advanced class placement. Advanced Placement exam scores are recognized and accepted in more than 60 countries (College Board, 2013).

Dual enrollment permits high-achieving high school students to enroll in college classes simultaneously with high school classes. Classes can be taught at the local high school or on college campuses. As long as the students meet the general admission requirements for college entrance, they are not restricted in classes enrolled. Some dual enrollment programs permit students to receive both high school and college credit for qualifying classes successfully completed (Alabama Community College System, 2010).

Career technical education dual enrollment programs aid in building and preserving technical core competencies for a skilled workforce. Career technical education programs align college curriculum and career readiness standards with the needs of high-growth industries to help close the skills gap. Students participating in Career technical education programs graduate with the postsecondary certificates or degrees needed to earn professional salaries. Students are also empowered to pursue additional postsecondary degrees due to the successes gained through career technical education participation (U.S. Department of Education, 2012).

Nationwide, increased participation in dual enrollment programs has been recognized over the past decade. For example, in a nationally representative survey of U.S. Title IV postsecondary institutions, data collected for the 2002–03 academic year, documented that 813,000 high school students enrolled in college-level courses. Roughly 680,000 were enrolled in dual enrollment programs (Kleiner & Lewis, 2005). A later survey for the 2010-11 academic

year documented increased participation to 1,277,100 high school students enrolled in college-level courses with 1,140,700 enrolled in dual enrollment programs (Thomas, Marken, Gray, & Lewis, 2013).

In response to the rapid growth in dual enrollment participation, 46 states have adopted statewide policies to define the characteristics of dual enrollment program offerings (Education Commission of the States, 2005). Nationwide, policymakers are focused on improving postsecondary attainment rates through innovative options expanding access to a broader range of students via dual enrollment allowance. Moreover, the various early college pathways to postsecondary credentials have seen transformational results with noticeable changes observed, not only in local economies but also in the trajectory of the lives of individuals who would not have matriculated to postsecondary institutions (Education Commission of the States, 2005; Farrell & Seifert, 2007)

Background

Alabama's economy, like the nation's, began to shift in 2010 with rapid job losses due to the economic recession and natural disasters (Alabama Community College System, 2011). In an effort to reshape Alabama's workforce, the state began placing importance on workforce training and postsecondary attainment to lure jobs back to the state. The key to this initiative is the promotion of college and career readiness for Alabama's high school students. The proposed increases would affect small business development and the State's ability to lure and cultivate diverse industries with a sophisticated labor force (Alabama Community College System, 2011).

The state of Alabama is situated in an increasingly globalized world, which directs its economic efforts. The educational attainment of the populace is critical to future economic plans which influence the state's ability to attract new industries and maintain old ones. The economic

landscape in Alabama paints a contradictory picture with larger municipalities, increasing in population and job growth, and depressed municipalities, whose populations are suffering diminutive job prospects and economic mobility (Center for Leadership and Public Policy, 2011).

To improve statewide economic contradictions, Alabama established an Economic Development Alliance (Alliance) to build pathways to living wage employment opportunities (Office of the Governor of Alabama, 2011). The Alliance membership is a collaboration between business and industry and all levels of the education system. The Alliance has helped the state to develop the infrastructure for economic opportunities with the enhancement and development of programs aimed at addressing barriers to educational advancement. For example, the state concluded that job opportunities for individuals without postsecondary credentials and high school diplomas were limited (Office of the Governor of Alabama, 2017). Therefore, the ultimate goal of the state's economic strategic plan is to increase the state's stagnant rate of postsecondary credentials obtained for working age adults (Office of the Governor of Alabama, 2011).

Several strategies were developed to fulfill the economic strategic plan. The Alabama State Department of Education (K-12) developed a strategic plan (Plan 2020) intended to decrease high school dropout rates, among other goals. The overarching goal of Plan 2020 is to ensure that high school graduates have the knowledge and skills needed to be successful at two or four-year colleges and universities, without the need for remediation. One innovative initiative of the plan was to increase funding to pre-K programs. The primary objective of the pre-K program is to improve the academic readiness of children entering primary schools in

order to increase high school graduation rates to 90% by the year 2020 (Alabama State Board of Education, 2016).

Another strategy executed was the expansion of the A+ College Ready program. This is a statewide initiative to increase the number of high school students who successfully complete Advanced Placement exams. In recent years, Alabama has seen a steady increase in successful Advanced Placement exam scores in math, science, and English. These increases have resulted in first place national designations from 2008 – 2014 academic years. These first place designations are attributed to the increases in the percentage of students that successfully pass Advanced Placement tests and increases in the percentage of minority students that successfully pass. Over 60,000 high school students have earned over 20,000 qualifying scores in math, science, and English, saving Alabama families approximately \$36 million in college tuition. With the success of A+ College Ready, the Alabama Department of Education will continue to expand this program by adding 20 high schools annually. It is projected that by the year 2020, over 335 high schools will have the A+ College Ready program on campus (Alabama Department of Education, 2015).

While the state has experienced successes with the A+ College Ready program, it cannot increase the postsecondary attainment rate needed to create a globally competitive workforce. Expansion of dual enrollment programs is also necessary. Dual enrollment programs allow high school students to simultaneously complete coursework at community colleges and earn both high school and college credits. In the fall of 2015, over 11,708 high school students completed 35,955 credit hours in various dual enrollment programs in Alabama's community colleges (Alabama Community College System, 2016).

Dual enrollment programs in Alabama offer students either an academic or career technical path toward a postsecondary education. Students enrolled in the academic courses are responsible for paying tuition and fees. Students enrolled in the career and technical programs focus on specific careers through technical or health certificate programs. The state of Alabama pays for students' tuition and fees in order to fulfill its future workforce initiatives (Alabama Community College System, 2010; Alabama Community College System, 2016).

Due to the confluence of a retiring workforce and job creation from economic development initiatives aimed at high technical industries such as auto manufacturing, it is projected that over half of available jobs in Alabama will require postsecondary credentials (Southern Education Foundation, 2008). High school credentials will no longer be enough for employment in higher wage industries. Researchers have hypothesized that postsecondary attainment is critical to the state's economic future, citing the potential for state's dropout rate to influence the state's economic future (Southern Education Foundation, 2008).

Dual enrollment in career technical education programs is the hub of the state's approach to workforce development. Alabama passed legislation in 2014 (Act 2014-147) providing tax credits to individuals and businesses that make contributions for educational expenses directly related to career technical education dual enrollment programs. This law became effective beginning January 1, 2015. The legislation strengthens the partnerships between local school districts, community colleges, and business and industry. Increased funding for career technical education dual enrollment programs allows more students exposure to career options earlier in their academic life; most dual enrollment programs start as early as the 10th grade. This law also serves to remove a critical barrier to postsecondary degree attainment: financial hardship. Moreover, increased funding to career technical education dual enrollment programs connect

Alabama high school students to needed educational opportunities that build high technical skills and allows them to compete for living wage employment (Alabama Community College System, 2016). This research focuses on the dual enrollment program implementation efforts at the secondary level. The results will highlight how K-12 administrators facilitate student participation and showcase the educational practices employed.

Problem Statement

Despite the increasing participation of dual enrollment programs, little is known about the process by which high schools implement their programs to increase student participation. There are few studies that provide insights into individual high schools which have high student participation in dual enrollment programs. In addition, the current literature has not identified educational practices that may lead to higher student participation in dual enrollment programs.

Purpose Statement

This qualitative research study had three purposes. The first purpose was to describe the salient actions of a public high school in the state of Alabama which has been recognized for having higher student participation in dual enrollment programs. The second purpose was to describe the challenges the high school faced in order to have a higher participation rate. The third and final purpose of this study was to better understand how the high school implemented the dual enrollment program. Specifically, the study's purpose was to uncover the educational practices of a thriving high school that attracts students to participate in dual enrollment programs. The findings may serve as a blueprint for quality dual enrollment program execution and focus needed attention on institutional practices to help high schools overcome barriers to student participation. This study could stimulate discussions on how to increase the number of postsecondary credentials obtained by Alabama high school graduates.

Research Questions

The following research questions were addressed in this study:

- 1) What were the strategies the high school used to attract students to participate in dual enrollment programs;
- 2) How did the high school assist students in successfully completing dual enrollment programs; and
- 3) What challenges does the high school face in the implementation of dual enrollment programs?

Significance of the Study

The significance of this study is its practical applications in increasing the number of Alabamians with postsecondary credentials. The importance of understanding factors that contribute to the implementation of dual enrollment at a high school with higher participation rates is especially important to high schools with lower student participation rates. Therefore, the significance of this study was to understand how this high school achieved higher dual enrollment participation rate.

Philosophical Assumptions

This research endeavor was conducted on the basis of the philosophical assumptions of constructivism. Ontologically, it is assumed that multiple realities exist and are constructed by means of lived experiences and social interactions. Epistemologically, it is assumed that reality is co-constructed between the researcher and the researched. Axiologically, it is assumed that individual values are honored and negotiated among individuals. As such, it is also assumed that research is value-laden. Methodologically, it is assumed that research is emergent and that findings are best attained through consensus (Lincoln & Guba, 1985).

Delimitations

This research study explored dual enrollment program implementation and student participation at one Alabama high school. The research aimed to explore the institutional practices that influence student participation. The results are transferable based upon educational contexts.

Limitations

Although this research was carefully prepared limitations were existing. The research was conducted at a public high school for one week during the academic year. A week was not enough time for the researcher to observe all the institutional practices aimed at dual enrollment participation. A longer time frame would have generated more information on institutional practices.

This study relied upon the accuracy of information submitted by the Alabama Department of Education and the Alabama Commission on Higher Education. The study also relied upon the accuracy of information gathered during interviews. The final limitation to the study was that dual enrollment participation was not evaluated from the student's perspective.

Definitions of Key Terms

Dual enrollment programs are shared efforts between high schools, colleges, or universities in which high school students are allowed to enroll in college courses. Students earn college credits, and in some cases, students earn high school and college credit simultaneously; these programs are referred to as dual credit or concurrent enrollment (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007).

Special populations are individuals with disabilities or from economically disadvantaged families preparing for nontraditional training and employment (Silverberg, Warner, Fong, & Goodwin, 2004).

Successful high school, for the purpose of this study, are high schools with a large percentage of the student population enrolled in dual enrollment.

Credentialism is the belief that certificates and/or degrees are evidence of an individual's qualification to perform a job or accomplish social status (Blau & Duncan, 1967; Becker, 1993).

Structural coding “applies a content based or conceptual phrase representing a topic of inquiry to a segment of data to both code and categorize the data corpus” in research (Saldaña, 2010, p. 67).

Descriptive coding “assigns basic labels to data to provide an inventory of their topics” often used as the first step in the coding process (Saldaña, 2010, p. 67).

In vivo coding “draws from the participants own language for codes” (Saldaña, 2010, p. 67).

Organization of the Study

This dissertation explores dual enrollment program implementation and student participation at a public high school in Alabama that demonstrated greater dual enrollment program infiltration based upon a percentage of student enrollment participation. An analysis of current data was used to describe the educational practices of the administration and faculty involved in dual enrollment program participation. Data were collected to better understand what the high school practices are that effectively attract students to participate in dual enrollment programs. For this study, all types of dual enrollment programs were included when determining the percentage of student participation at the high school.

This study is divided into five chapters. Chapter I provided introductory and background information on the problem as well as the research questions to be answered. The purpose and significance of the study are outlined in Chapter I as well as the study's limitations, assumptions, and definitions of key terms. Chapter II is a review of current literature relevant to dual enrollment initiatives. Chapter III explains the methodological approach used in gathering and analyzing the data. Chapter IV provides results noted from the research data, and Chapter V presents further discussion for policymakers.

CHAPTER II:
REVIEW OF RELATED LITERATURE

Introduction

This chapter provides a review of current literature and secondary data related to the efficacy of dual enrollment participation by secondary students. Much has been written over the past five decades about the economics of education. Numerous studies highlight the range of inequities in postsecondary attainment for economically disadvantaged students. Emphasis on access to postsecondary education, the underlining barriers to postsecondary education for different student populations (namely financial, academic preparedness, and state and institutional policies) has been well documented (Barnett & Bragg, 2006; Advisory Committee on Student Financial Assistance, 2002; Advisory Committee on Student Financial Assistance, 2006). This chapter provides an analysis of the literature relevant to the economics of education and the role dual enrollment programs play in improving postsecondary attainment rates. The concerns surrounding dual enrollment program attributes, student preparedness, collaborative partnerships, economic outlook, and student success are also explored.

To better understand dual enrollment programs, the examination of various dual enrollment program attributes, nationally, will outline the various program fundamentals including location, pedagogy, and eligibility requirements for dual enrollment participation. This research is important because it allows an understanding of dual enrollment programs and describe characteristics about students who choose to participate in them.

Variations in Dual Enrollment Programs

Dual enrollment of secondary students has become viewed as a strategy for seamless transition to postsecondary education because it allows students to begin college early (Barnett & Stamm, 2010; Southern Regional Education Board, 2008). Moreover, it has become widely viewed as a mechanism to reduce high school dropout rates by keeping students engaged in the learning process with the prospect of earning a certificate, associate's degree, or college credits towards a bachelor's degree (Southern Regional Education Board, 2008).

For the purpose of this study, the definition of dual enrollment provided by the Education Commission of the States was adopted to serve as a platform through which the varying attributes of dual enrollment programs will be discussed. The adopted definition states that dual enrollment programs provide high school students an opportunity to earn both secondary and/or postsecondary course credit before graduating from high school (Education Commission of the States, 2005; Education Commission of the States, 2013). Dual enrollment programs have been in existence for many years. Accordingly, there are variations in the implementation of the programs (as seen in Appendix A). The type of course credit awarded (secondary, postsecondary, or dual credit) differs and depends largely based on the type of dual enrollment program in which the student is enrolled.

It is useful to list the various program types and the implementation methods used nationwide. In 2013, the Education Commission of the States and the National Center for Education Statistics (NCES) provided a comprehensive list and profile of dual enrollment implementation nationally. NCES collected representative data from 1,365 public high schools in fifty states and the District of Columbia on dual credit and exam-based dual enrollment

programs during the 2010-11 academic year to assess dual credit offerings in American public high schools (Thomas, Marken, Gray, & Lewis, 2013).

The Education Commission of the States (2013) analyzed state statutes and rules and regulations to compile a listing of variations and similarities of program offerings (Education Commission of the States, 2013). Both studies found that dual enrollment programs are offered in various forms in nearly every state. The data indicated that dual enrollment programs expanded access to college credit by high school students beyond a small percentage of the student population. The expansion beyond the traditionally high achieving students taking Advance Placement or International Baccalaureate courses now includes the general student population in all community types: city, suburban, towns, and rural areas (Thomas, Marken, Gray, & Lewis, 2013).

Nationwide, policymakers are focused on improving postsecondary attainment rates through innovative options expanding access to a broader range of students via dual enrollment extension (Farrell & Seifert, 2007; Education Commission of the States, 2005). The implementation of dual enrollment programs has experts identifying many challenges that have evolved due to varying program features (Bueschel & Venezia, 2006). For example, the pedagogy used varies with some states using course offerings specially designed for secondary students taught by secondary faculty (Education Commission of the States, 2005) while others are taught by postsecondary faculty at their home postsecondary institutions (Education Commission of the States, 2005). Additionally, restrictions on the location of course offerings vary. Some states employ both online options, and off-site locations. Articulation agreements also fluctuate together with credit accrual. A number of states only permit the award of college

credit immediately upon completion of course work yet others require postsecondary enrollment before course credits are awarded (Education Commission of the States, 2005).

Eligibility requirements also vary from state to state. For instance, minimum grade level requirements vary from 9th grade to 11th grade (Education Commission of the States, 2013). Additional eligibility requirements include minimal grade point averages, school and/or district approval, parental approval, and postsecondary entrance requirements. Although community colleges' access to dual enrollment programs is primarily open, four-year institutions participating in dual enrollment programs often require students meet their entrance requirements. Community and technical colleges may also require placement examinations. Detractors argue that the variation in legislation among states is often considered a barrier to postsecondary matriculation for some students (Bueschel & Venezia, 2006). While many scholars depict effective secondary and postsecondary partnerships, many have suggested that critical difficulties exist (Bueschel & Venezia, 2006).

Bueschel and Venezia (2006) have argued that traditional modes of educational operations are not sustainable as funding sources have declined (Bueschel & Venezia, 2006). Funding reductions and continued public scrutiny over the cost of education has policymakers looking for more efficient models of shared operational and administrative services. One example focused on the impact of the funding structure in many states, signifying secondary and postsecondary institutions compete for limited funds. When groups compete for funding, they generally do not share information resulting in increased inefficiencies and missed opportunities. The analysis of education legislation for education standards and curriculum in two states, California and Florida, found that when secondary and postsecondary institutions serve as

partners, not adversaries, they can gain new insight to saving opportunities by understanding the cost drivers.

Bueschel and Venezia (2006) also highlighted the lack of shared services and put forward another example of barriers to effective partnerships. Many states have failed to develop a common vocabulary with common definitions in their enacted legislations, thereby creating barriers between secondary and postsecondary education activities (Bueschel & Venezia, 2006). Due to the varying definitions, educators at both levels have different views on what constitute college readiness. According to the study findings, the adoption of a common vocabulary would help administrators ensure students have clearer pathways to postsecondary institutions.

The study pointed out the complexity of shared services design and implementation which would make its adoption complex (Bueschel & Venezia, 2006). For example, the comprehensive assessment tests used by secondary educators are not used or valued by postsecondary institutions causing many students to duplicate efforts by completing remedial (duplicate) courses. The authors added recommendations for the adoption of shared comprehensive assessment tools to eliminate barriers and provide clear goals for student readiness for matriculation to postsecondary institutions. Such initiatives to voluntarily adopt shared instruments and common vocabulary would, by definition, establish shared goals and expectations for students and improve college matriculation and completion rates in America.

In contrast, a growing number of researchers have argued that states have put forth great efforts to improve the relationship between secondary and postsecondary education (Farrell & Seifert, 2007; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). Farrell and Seifert (2007) suggested that the variations in legislation actually remove bureaucratic barriers that would prohibit local school districts from forming successful collaborative relationships (Farrell &

Seifert, 2007). Loosely written legislation affords local school districts the ability to better meet the needs of their students which in turn creates critical pathways to postsecondary institutions and ultimate pathways to the workforce in diverse careers.

Despite the documented benefits of secondary dual enrollment programs, a review of the literature in this area revealed that universal adoption of mandatory dual enrollment programs is relatively low (as seen in Appendix A), with only 12 states requiring all public institutions, secondary and postsecondary, to provide dual enrollment opportunities and notification of program offerings (Education Commission of the States, 2013). The absence of legislation with mandatory language for eligible students results in school districts less inclined to promote dual enrollment options for students. According to the Education Commission of the States (2013), 46 states have statewide policies in place for dual enrollment program offerings. However, in 20 states, the programs are based on voluntary partnerships between secondary, postsecondary, and/or local school districts. Five states have multiple dual enrollment options: one program is mandatory and the others are voluntary partnerships. The literature provides information about the effectiveness of dual enrollment programs regardless of the variation in program offerings.

Effectiveness of Dual Enrollment Programs

In recent years, researchers have focused on the underlying mechanisms of dual enrollment programs and their relation to academic improvements of program participants (Karp & Hughes, 2008; Hebert, 2001; Golann & Hughes, 2008). The resulting evidence continues to accumulate showing a positive correlation between improved grade point averages, higher standardized test scores, and an overall reduction in academic remediation to program participation (Karp & Hughes, 2008). The studies of all of the various program types also illustrate a positive correlation in program participation with matriculation to postsecondary

education. However, for students enrolled in career technical courses, the correlations were stronger.

Although dual enrollment programs have seen a surge in popularity and funding, central to the discussion are studies evaluating the rigor and quality of the education received (Hebert, 2001). Hebert (2001) focused on learning outcomes of students dually enrolled in mathematics. The study's findings challenged critics of dual enrollment program offerings and reported high-quality dual enrollment programs with successful results noted for student participants. Hebert (2001) separated 1,833 students into two groups, college level mathematics taught exclusively by high school instructors or college professors, and compared the students' first mathematics course grades in courses completed after high school graduation. The study found that quality was not lost when high school instructors taught college level mathematics. In fact, students maintained higher grades not only in mathematics but in all subsequent course work compared to dual enrolled students taught by college professors. Moreover, I concluded that the learning outcomes were superior for dual enrollment courses taught by high school teachers, indicating high quality and academically challenging course work was provided to students.

Hebert's (2001) research results were later confirmed by Morrison (2008) in a review of 17 Northern Iowa area community colleges with dually enrolled secondary students. Morrison's (2008) study also examined learning outcomes for students based upon the instructor and the location where the classes were taught: secondary institutions or postsecondary institutions. The research found that the location of college credit classes was not related to the student success (Morrison, 2008). I pointed out that, in all but one of the college credit courses, the students in classes held at the local high school exceeded the performance of students who took classes on

college campuses. Moreover, his review found an almost 18% gain in matriculation to senior institutions in Iowa with 72% successfully graduating with a baccalaureate degree.

The empirical literature that examined dual enrollment programs provides compelling evidence that high school students enrolled in such programs are more likely to complete both programs, as well as matriculate to a four-year institution (Karp & Hughes, 2008; Hughes, 2010; Golann & Hughes, 2008; Dare, 2006). Moreover, research findings document that the successful collaborative relationships between secondary and postsecondary education not only translate to differences in matriculation rate to postsecondary institutions, also persistence to degree attainment as well.

Student Participation in Dual Enrollment Programs

This section explores the relationship dual enrollment programs have to postsecondary attainment rates of different student populations. It is clear from the literature that dual enrollment program participation is closely associated with postsecondary degree attainment. So, keeping in mind that program participation and degree attainment are inextricably linked, it is useful to understand how this connection can be leveraged to generate a highly skilled workforce. In as much as dual enrollment of high school students is viewed as a strategy to promote postsecondary attainment, it is also widely viewed as a mechanism to reduce high school dropout rates by keeping students engaged in the learning process with the prospect of earning postsecondary certificates, an associate's degree, or receiving college course credits from accredited postsecondary institutions (Barnett & Stamm, 2010; Southern Regional Education Board, 2008; Southern Regional Education Board, 2010).

At the end of the 20th century, trends in higher education funding had a negative impact on low-income students with approximately 1.6 million fully prepared medium and low-income

students unable to attend college due to financial barriers (Advisory Committee on Student Financial Assistance, 2006). In the national report *Mortgaging our Future: How Financial Barriers to College Undercut America's Global Competitiveness*, the researchers examined three data sets. A comparative analysis of the National Education Longitudinal Study of 1988 that tracked 8th graders from 1988 through 2000 to the Education Longitudinal Study of 2002 and tracked 10th graders in 2002 to matriculation to postsecondary education was conducted. The third data set used for comparative analysis included the National Postsecondary Student Aid Survey, which studied the various ways students pay for postsecondary education. Additionally, the National Postsecondary Student Aid Survey compared financial aid awards to the total cost of college. The researchers postulated that financial barriers are the primary challenge that prevents millions of low and moderate income, academically prepared students from postsecondary degree attainment annually. A key finding in the report revealed that gains made in secondary education early intervention programs such as dual enrollment showed promise. However, the increases in tuition at colleges and universities have undermined the gains observed.

For example, career exploration in various fields of study often begins in high school and gains momentum throughout the high school years. However, for some low to moderate-income students, the impetus gained during high school comes to an abrupt halt as financial barriers prove to be impassable (Advisory Committee on Student Financial Assistance, 2006). The report also found that a principal purpose of early intervention programs is to develop awareness of the importance of college and vital degree attainment. The effectiveness of early intervention programs depends on students developing higher aspirations. Higher aspirations create the motivation to academically prepare for postsecondary curriculum which leads to higher

expectations, planning for college, and final enrollment at a postsecondary institution. The data illustrated that despite higher expectations in the 10th grade, by the 12th grade low to moderate income students fail to matriculate to postsecondary institutions because of concerns about the rising cost of college and the accessibility of financial aid.

One such early intervention program, dual enrollment, contributes greatly in expanding access to postsecondary education as funding trends in education over the past three decades have adversely impacted postsecondary attainment and subsequent labor force participation for low to moderate income students (Farrell & Seifert, 2007; Zusman, 2005). Even with the establishment of the Pell Grant, access to higher education improved only marginally as the number of low-income students successfully completing an undergraduate degree decreased during the 1980s and 1990s (Zusman, 2005). In Berube's (2010) study, the overall postsecondary attainment rate for young adults had declined and gains noted in prior decades were diminishing (Berube, 2010). Moreover, Berube (2010) posited that for traditionally underrepresented students the results were dismal, as these students lagged behind white and Asian students' postsecondary attainment rates during this same time period.

In recent decades, scholars have documented many barriers to access to postsecondary education and degree completion (Katz & O'Leary, 2002; Lin & Vogt, 1996; Laird, Chen, & Levesque, 2006). For example, some scholars have argued that students were not as academically prepared due to the courses taken during high school, that low-income students often lack the cultural capital needed to properly prepare for postsecondary education, that financial barriers prohibit access to postsecondary education, or that the students were often first-generation postsecondary students with minimal support from parents (Katz & O'Leary, 2002; Lin & Vogt, 1996; Laird, Chen, & Levesque, 2006). To understand the barriers to postsecondary

matriculation, Goldrick-Rab and Han (2011) tracked the academic pathways of 8,523 high school seniors using the National Education Longitude Survey of 1988 (Goldrick-Rab & Han, 2011). The study examined the probability of delaying college entrance. Similar to other study findings, the researchers found that socioeconomic background had a negative relationship to postsecondary matriculation. Additionally, the study found that socioeconomic background was a predictor for matriculation delay, citing 31% of lower socioeconomic seniors delayed matriculation compared to 5% of seniors in the high socioeconomic status.

Socioeconomic status was further explored in the report, *A Profile of Young Workers (16-24) in Low-Income Families*, which analyzed census and other data to generate an aggregate profile of income, educational background, demographics, household, and employment for young adults 16-26 from low-income families (Tamkins, Bond, Matos, & Galinsky, 2011). The report compared low-income youth to higher-income youth and found that many barriers including challenging life experiences often influence postsecondary degree achievement. Life experiences such as living arrangements and employment were often a major barrier to degree attainment. The study found that 16-26-year-old youth were “more likely to live with a head of household who is a non-relative, or their unmarried partner, or to head their own household in each age group” compared to the same age group from higher income families (Tamkins, Bond, Matos, & Galinsky, 2011, p. 5). For many low-income youth, their salaries were important contributions to their family household making it more difficult to balance work activities with educational pursuit. For some, their low-income parents were unable to provide housing for their children’s growing family which often pressed these youths to prematurely establish their own households. The researchers found that some low-income youth were also hard-pressed into early employment with inflexible work schedules that did not promote or support educational

pursuit. In addition, the researchers pointed out that just under half of the low-income youth never received any postsecondary education. For the ones that had some postsecondary education, only 24% had earned degrees, leaving many who never matriculated to postsecondary institutions. Most of these students were found to be single minority females.

In order to understand the profile of student populations on college campuses, more researchers are turning to student development theories to improve postsecondary attainment rates (Schlossberg, 1984; Astin, 1999). Schlossberg's (1984) transition theory was devised to provide guidance for student service professionals working with students facing transitional events in their lives (Schlossberg, 1984). According to Schlossberg, once students have advanced through the various transition phases of becoming a college student, then they will be able to cope and put together a daily routine to help them balance their competing priorities. Central to Schlossberg's theory is the premise that the transitional process helps students cope with their challenging life experiences. Schlossberg found that if nontraditional students do not successfully navigate through the transition phases, then they are more likely to drop out.

For Astin (1999), the attrition of college students is a major concern. In order to aid non-traditional students' acclimation to new environments, their level of involvement in campus activities is crucial (Astin, 1999). According to Astin's involvement theory, the more students are involved with campus experiences, the more they feel connected to the institution. Astin has also promoted the funding of employment opportunities on campuses which will help institutions retain working students by eliminating the need for students to seek employment off campus. Astin's research has illustrated that students who work on campus have a better chance of graduating; whereas students who work off campus are more inclined to drop out. Astin has inferred that institutions should take action in creating strategies to support students and become

proactive in their response to the changing characteristic of today's undergraduate students. By becoming proactive, colleges and universities can mitigate the barriers their institutional culture has on the various student subpopulations in higher education today.

Likewise, Museus' (2007) analysis of barriers to postsecondary degree attainment found that institutional culture was difficult for traditionally underrepresented students to overcome (Museus, 2007). Museus also proposed the importance of higher education institutions to assess their institutional culture in determining if it had a negative impact on student subpopulations. A mitigation plan must be developed to eliminate this barrier in order to promote student success. For Harper (2007), it is more important to understand the students, utilizing phenomenology to explore their salient issues first, to effectively gauge how college affects students and subsequent postsecondary attainment efforts (Harper, 2007). Harper (2007) found it is critical for higher education professionals to be enlightened about students and their salient issues. By understanding their concerns and knowing why they engage in certain behaviors, then institutions can reduce the dropout rates. To understand the evolving student subpopulations on college campuses is key to removing barriers to postsecondary attainment.

To understand the significant issues of the various student subpopulations in Texas, the Texas Guaranteed Student Loan Corporation (2010) documented the challenges students enrolled in dual enrollment programs in Texas had to overcome before successfully completing the dual enrollment programs (Texas Guaranteed Student Loan Corporation, 2010). The case study revealed that despite the overall success of the graduates of the dual enrollment programs, there were many barriers that the program had to help students overcome in order to improve success, especially for the underserved student populations. The primary barrier discussed included the students' lack of transportation. The lack of transportation translated to the students' inability to

attend evening and weekend classes or attend tutoring sessions if needed. Another barrier depicted in the case study was miscommunication between the school district and the college, with the school district failing to provide textbooks to students and properly align course schedules. Nonetheless, students still persisted in the program and successfully graduated. Green (2006) found that, nationwide, the number of traditionally underserved students taking advantage of the various academic pathways to postsecondary education is declining, citing many of the same barriers identified by the Texas Guaranteed Student Loan Corporation (2010).

In a study conducted by the National Center for Education Statistics (2013), a key finding in their survey was that dual enrollment programs remove some barriers to degree attainment. For example, the study found that transportation was required for some course offerings; 5% of the high schools surveyed reported that transportation cost was paid by the state, 31% reported that it was paid by the school district. Additionally, financial barriers were also reduced for some students with 46% of the high schools surveyed reporting that students paid fees only for dual credit courses with an academic focus. The school or districts paid full or partial tuition, books, and fees with similar percentages noted for students enrolled in career and technical focus programs. Moreover, NCES found that for the 2010-11 academic year, associates' degrees were awarded from a pool of 1.4 million dually enrolled students with an academic focus and postsecondary certificates were awarded from a pool of 601,500 dual enrolled students with a career and technical focus.

Kim and Bragg (2008) reported on the impact of dual credits and articulated college credit hours on college readiness and retention (Kim & Bragg, 2008). The study used an existing data set collected for the *Community College and Beyond* study; 1,141 student records from eight states were analyzed. The study posited that, historically, student retention and completion at

community colleges is problematic. However, the study indicated a significant positive relationship between articulated credit hours earned and total college-level credit hours earned; the results suggested improved student retention and completion rates for students who participated in dual enrollment offering while in high school and were more likely and more motivated to obtain postsecondary credentials than those who did not.

Other studies also have documented the positive outcomes of the various academic pathways dual enrollment programs present to students. Barnett and Bragg (2006) analyzed outcome assessments on various models of dual enrollment programs and argued that having several entrances and exit points to postsecondary education provides all students with flexibility and more options compared to the traditional college preparatory curriculum (Barnett & Bragg, 2006). For underserved and special population students, the researchers found the results were more notable, stating that dual enrollment programs, in general, allowed these students to flourish at postsecondary institutions.

Other scholars have argued that it is critical to improve postsecondary degree attainment levels in America by promoting college aspirations in middle and high school with college counseling services (College Board, 2007). Moreover, they have supported coordinating efforts with law and policymakers to improve high school dropout rates and completion rates with the promotion of college and career aspirations, making college and career preparedness part of the graduation process. A key recommendation was to build the social skills needed by means of a coordinated approach with guidance counselors and academic counselors.

Another study's findings suggested a barrier other than financial and environmental, specifying that the nation's secondary education systems have failed to properly prepare students for college success, which is the foremost barrier students from lower socioeconomic

backgrounds must overcome in order to achieve social and economic mobility (Haveman & Smeeding, 2006). They further examined different elements related to student success, and their findings were consistent with those of other researchers. However, they elucidated that nonperforming secondary institutions fail to teach proper “study and work habits for postsecondary success” (Haveman & Smeeding, 2006, p. 136). Haveman and Smeeding (2006) argued that access to college is over-emphasized opposed to preparation for success in college, especially at lower income serving secondary institutions.

Overall, the literature on different student populations enrolled in the various academic pathways found that dual enrollment programs are positive, documenting improved overall matriculation to postsecondary institutions. The results were mixed for nonparticipating students from different student populations. The importance of engaging high school students in enriching educational activities and elevating their educational experiences, via programs like dual enrollment, has been well established in the literature (Barnett & Stamm, 2010; College Board, 2007; Barnett & Bragg, 2006; Education Commission of the States, 2005; Thomas, Marken, Gray, & Lewis, 2013; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). Many experts have argued that early exposure to college motivates high school students and builds confidence and understanding of postsecondary expectations with each successfully completed course; thereby, facilitating critical pathways to postsecondary institutions (Nunley, Shartle-Galotto, & Smith, 2000; Lewis & Overman, 2008; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). The abundance of literature reviewed suggests that students who enroll in various early college programs are more likely to graduate from high school, matriculate to college, and perform better in college than students who did not dually enroll with noticeable increases in likelihood for male, minority, and lower socioeconomic students (Bueschel & Venezia, 2006; College Board,

2007; Dare, 2006; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; Nunley, Shartle-Galotto, & Smith, 2000; Watson, 1993; Barnett & Bragg, 2006). All-in-all, the results of the various studies presented attest that dual enrollment programs provide an avenue to remove some of the barriers to postsecondary degree attainment.

Career Technical Education

The history of funding vocational education for adolescents in secondary education is traceable to the early 1900s with the ratification of the Smith-Hughes Act of 1917 (Silverberg, Warner, Fong, & Goodwin, 2004). The ratification of the Smith-Hughes Act also provided the momentum and the federal funding structure for future vocational and technical educational programs. The various laws passed over the subsequent decades expanded educational program offerings. For example, the passage of the War Production Training Act of 1945 expanded vocational education and introduced open entry concept for enrollment to postsecondary institutions. It also expanded technical education and vocational education with three program tracks: vocational education, general education, and job training (Silverberg, Warner, Fong, & Goodwin, 2004).

During the late 1940s, the nation's booming economy began to transition towards a knowledge-based economy that required complex competencies in workplace skills. During the 1970s, the passage of the Vocational Act of 1973 was later modified to become the Carl D. Perkins Vocational and Technical Education Acts of 1984, 1990, 1998, and 2006 (hereafter each modification to the Perkins Act will be referred to as Perkins I for 1984, Perkins II for 1990, Perkins III for 1998, and Perkins IV for 2006), with the overarching goal of improving access and postsecondary attainment rates in the United States (Silverberg, Warner, Fong, & Goodwin, 2004).

Perkins III encouraged and supported the integration of secondary and postsecondary education via the use of high school dual enrollment programs to improve postsecondary attainment for low to moderate-income high school students. Additionally, federal policy outlined in Perkins III provided pathways to postsecondary education via high school participation in dual enrollment in Career Technical Education programs which provided students advanced training and access to higher wage jobs (Silverberg, Warner, Fong, & Goodwin, 2004; U.S. Department of Education Office of Vocational and Adult Education Division of Career and Technical Education, 2007).

Perkins IV further expounded upon career and technical program designs to help fully develop the academic and career and technical skills of students enrolled in Career Technical Education programs. The federal policy for program design outlined in Perkins IV focused on sequences of coherent and rigorous academic and career and technical courses that meet postsecondary degree and industry certificate and credential requirements. The provision of Perkins IV outlines technical skill proficiencies that include competency-based applied learning which contributes, not only to the academic knowledge, also to the general employability of the participant (Silverberg, Warner, Fong, & Goodwin, 2004; U.S. Department of Education Office of Vocational and Adult Education Division of Career and Technical Education, 2007).

Employment Opportunities for Career Technical Education Graduates

A central theme in the literature is the declining postsecondary attainment rate in the United States and its relationship to future employment opportunities (Berube, 2010; Haveman & Smeeding, 2006; College Board Advocacy, 2008; Vargas, 2013). According to the Department of Labor, global competition will continue to shape and influence the trajectory of employment trends for highly skilled occupations for years to come (U.S. Bureau of Labor

Statistics, 2013). Central to the discussion of the skills gaps is the role community colleges have in reducing the skills gap and educating the unskilled workforce. Community colleges traditionally provide accessible and affordable education and workforce training, specifically through open enrollment which provides flexible pathways to education opportunities via swift means of filling the skills gap.

Throughout his eight years in office, the Obama administration pushed to make postsecondary attainment a national priority to bridge the skills gap and reduce the nation's unemployment rate, placing emphasis on the role community colleges have in this national agenda (White House Task Force, 2013). Many researchers view the collaboration between secondary and postsecondary educational programs, like career technical education dual enrollment, as a strategic asset that can be leveraged to bridge the skills gap by leveraging operational and financial imperatives in the current education intense economy (Alfonso, 2006; Barnett & Stamm, 2010; Bueschel & Venezia, 2006). Many studies have concluded that in order for workers to meet the increasing demands of skilled jobs, dual enrollment in career and technical disciplines would provide an avenue for students to attain the knowledge, skills, and abilities needed to perform increasingly complicated tasks as technology continues to be integral in business (Baron, 2010; Draeger, 2006). Career technical education links theoretical to practical application and provides multiple pathways for labor force participation for student participants (Baron, 2010; National Skills Coalition, 2011).

As the market for unskilled workers continues to contract, it has further expanded the skills gap in the United States labor force (U.S. Bureau of Labor Statistics, 2013; Unruh, 2011). The growing skills gap in the United States has been noticeable since the 1970s as the American economy transitioned from manufacturing to knowledge-based. Unskilled manufacturing jobs

have progressively decreased as many manufacturing companies have left the United States for countries with cheaper unskilled labor forces. The ongoing employment trends that replaced manufacturing jobs required a more highly skilled workforce. The distinct skills gap has many researchers reassessing the role which community colleges have in addressing the skills gap.

Central to the discussion is the question what is the value of a degree? In a recent report *Reclaiming the American Dream: Community Colleges and the Nation's Future*, the authors tackled important topics such as student access, budget constraints, big ideas for the future, and institutional accountability (21st Century Commission on the Future of Community Colleges, 2012). Data were gathered nationwide from more than 1,300 stakeholders. The stakeholders consisted of a broad cross-section of individuals: states' policy makers, trustees, college administrators, faculty, and staff, as well as students. The authors were able to pinpoint common themes. The common themes were the need to reexamine the role, scope and mission of community colleges and the need for strategic partnerships, not only with K12 and baccalaureate institutions but also with the business community and local governments in order to address the skills gap facing the nation. This report called for a redesign of community colleges in order to make them more proactive in addressing the needs of business and industry, but also more agile in their reaction once trends have been identified.

In a recent study, *A Strong Nation Through Higher Education* (2012), the Lumina Foundation found that the growing appreciation for collaborative relationships between secondary and postsecondary education are being driven by multiple factors: the weak economy, which generated a surplus labor force allowing employers to require postsecondary credentials for labor force participation; loss in global competitive advantage; and economic stability with increases in postsecondary attainment levels (Lumina Foundation, 2012). The study examined

census data, trends, and the postsecondary attainment level of the nation. The study found that in 2010, Americans between the ages of 25 and 34 who attained postsecondary credentials increased to 39.3 % from 37.8 % in 2008. Moreover, the study found that 36 states have developed specific goals to increase their postsecondary credential attainment levels through the alignment of secondary and postsecondary education in an effort to strengthen their economy by attracting diverse, higher wage industries.

The Lumina Foundation's (2012) analysis of Alabama's census data revealed a steady postsecondary credential attainment rate from 2008 at 31.6% to 2010 at 31.5% of the 2.5 million working-age adults between the ages of 25 and 34 held postsecondary credentials (Lumina Foundation, 2012). Additionally, the 2010 census data revealed 577,000 (23%) of the working age adults between the ages of 25 and 34 completed some college. A further breakdown of the data revealed that rural counties in Alabama fared poorly with degree attainment levels, leaving the researchers to postulate that these counties have limited access to higher education, which can affect the state's economic outlook.

Although Alabama and other southern states have seen economic success by attracting new industries and expanding old ones to employ the states' workforce with diversified economies that include high-tech industries such as medicine, aeronautics, auto manufacturing, clean energy, nanotechnology, information technology, and biotechnology (Southern Education Foundation, 2008; Unruh, 2011), the overall education level of the workforce is threatening the state's economic gains (Southern Education Foundation, 2008; Unruh, 2011; Vargas, 2013). Sustaining economic gains will require all southern states not only to increase the number of high school students who attain postsecondary credentials but also will require reducing the number of students who drop out of secondary institutions. Due to the growth in high technical

industries, a skill gap in workers able to meet the market demands has occurred (Unruh, 2011). Moreover, many high-tech jobs do not require four-year degrees and account for 51% of the job growth in southern states.

The literature highlighted the value of career technical education as it pertains to employability and living wage salaries. The various studies reported that postsecondary educational attainment is a key factor required for employment and living wage salaries. In addition to the proper alignment of career technical education credentials, labor market demands are needed in order to connect employability and living wages. The gap in salaries based upon educational levels is also documented, as high school graduates without postsecondary credentials lag behind their counterparts with postsecondary credentials (College Measures, 2012; College Measures, 2013; College Measures, 2014; College Measures, 2015).

College Measures, in a joint collaboration with the American Institutes for Research, and Matrix Knowledge, supported by the Lumina Foundation, completed several statewide studies on the earnings of career technical education graduates and certificate completers. College Measures presented data to reflect outcomes after graduation in Texas, Tennessee, Colorado, and Virginia. Each statewide study focused on the median first-year earnings and compared it to the earning of graduates with bachelor's degrees from each state's postsecondary educational institutions. The key findings in the studies documented significant differences in salaries between career technical education graduates, certificate completers and bachelor's degree recipients (College Measures, 2015; College Measures, 2014; College Measures, 2013; College Measures, 2012).

In Texas, College Measures (2013) examined earning records for graduates from public postsecondary institution between 2006-2010. Earning records for the third through sixth quarter

data, included all levels of employment, full-time as well as part-time. A key finding in the report documented that students with technical associate of applied science degrees had more market value one year after graduation than some students with academic bachelor's degrees. For illustration, the report documented that the students with technical associate of applied science degrees earned professional middle-class salaries, earning on average \$11,000 more annually. When those same students advanced their education and earned a master's degree, the differences increased by approximately \$24,000 (College Measures, 2013).

College Measures (2013) documented the first year earning of many industry certificate holders. Industry certifications were popular credentials earned at community colleges in Texas. In many cases, the median first-year earnings often exceeded the earnings of graduates from academic, technical associate's programs, and some bachelor's degree holders by as much as \$30,000. The average salary was \$70,000 annually. The higher paying certificate programs in Texas included construction engineering, electrician, pipefitting, industrial technology, technicians in engineering, and instrumentation. In contrast, the study documented that not all industry certifications are created equal with some program leaving graduates earning less than \$13,000 annually. These low paying certificate programs included cosmetology, computer and information systems, nursing/patient care assistants, and network system administration (College Measures, 2013).

College Measures found similar results in Tennessee, Colorado, and Virginia (College Measures, 2014; College Measures, 2015; College Measures, 2012). For example, in Tennessee, a key finding was technical oriented degrees had higher salaries. Among the higher paying fields were aviation maintenance, electrical engineering, computer engineering, mechanical

engineering, and business management. The lower paying fields of study were cosmetology and journalism (College Measures, 2014).

The results from the Colorado study also revealed that commonly, Colorado college graduates' salaries are \$20,000 higher in the first year of employment compared to high school graduates without postsecondary credentials. Additionally, the salaries were higher for graduates with technically oriented credentials compared to the traditional liberal arts degrees. For many liberal arts fields (such as the Arts and English), the salaries were below the statewide benchmark ten years after graduation without the completion of a master's degree or higher. However, the differences in salaries were not consistency across the state. The variation in salaries was tied to the differences in the regional labor market demands. One example was the labor market demands in metropolitan areas generally paid more than in other parts of the state (College Measures, 2015).

College Measures (2012) likewise reported parallel results in Virginia. The key findings reported in this study were, across institution type, technical and career-oriented degrees earned more than earned academic degree holders. For example, at the bachelor's degree level, technical and career-oriented degrees earned more than liberal arts programs, on average, by \$24,000. The salaries of graduates with occupational and technical associate's degree, in most cases, were \$10,000 more than non-occupational associate's degree. In each of the studies completed by College Measures, the gap in salaries was significant for individuals without postsecondary credentials (College Measures, 2012).

College Measures reported in each study that technically oriented associate of applied science degrees and industry certification holders obtain the skills necessary to enter the workforce successfully (College Measures, 2012; College Measures, 2015; College Measures,

2013; College Measures, 2014). However, they caution that these graduates have degrees that are, for the most part, industry specific and highly vulnerable to changes that negatively impact the various industries. The researchers theorized that graduates would have difficulties maintaining the salary levels reported if the industries collapsed. Additionally, College Measures advocated that not all postsecondary credentials are equal and prospective students and their families should obtain information, not only, about higher education costs, but should also research the potential salaries for each field of study and the corresponding labor market demands.

Berube's (2010) examination of labor force participation echoed many of College Measures findings and reported that not only does educational attainment influence labor force participation, but the different geographical regions and the ensuing industries supported in those regions have a greater influence on labor force participation (Berube, 2010). Berube ranked 100 metropolitan areas based on degree attainment levels of the population. The study concluded that for the metropolitan areas ranked at the top for degree attainment levels, the primary workforce supported scientific and technical industries and offered professional services which required postsecondary attainment for labor force participation. In the lowest ranked metropolitan areas, the primary workforce supported older industrial industries where postsecondary attainment was not a qualification for higher wage employment and labor force participation.

Likewise, the report *Help Wanted: Projections of Jobs and Education Requirements Through 2018* examined the national economy and the employment trends since the 2007 recession began. The authors noted that the recession had caused a nationwide shift in employment toward jobs that require postsecondary credentials (Carnevale, Smith, & Strohl,

2010). Regardless of industry, the report concluded that technology is transforming the economic landscape in the United States with increased demands for workers who are able to perform complex tasks. The report stated that since the recession began, the United States had seen a loss of 7.8 million jobs which is more than the total job losses seen in the 1990 and 2001 recessions.

Because of the direct connection to economic productivity, postsecondary attainment is a central topic in public conversations at all levels of government with all stakeholders agreeing that in order to assure long-term economic growth with social stability, nationwide, postsecondary attainment rates in America must improve.

Symonds, Schwartz, and Ferguson (2011) illustrated the changing educational landscape in American since the 1940s and used statistical data to depict the resulting challenges (Symonds, Schwartz, & Ferguson, 2011). According to them, the economic success in many industrialized nations is closely linked to postsecondary attainment. Since the end of the 20th century, America has lost gains in postsecondary attainment. In addition to the growing evidence of a “skills gap,” the researchers found that since 1973, jobs for high school dropouts have drastically contracted from 32% to 11%.

Persistence Rate for Career Technical Education

As career technical education dual enrollment programs continue to evolve, many supporters believe enrollment in career and technical oriented disciplines will transform secondary schools to high performing entities (Southern Regional Education Board, 2008; Sundell & Shaughnessy, 2017; Bottoms & Squires, 2017). Career technical education dual enrollment programs have college level curriculum in applied science which is different from the vocational education of the past (Southern Regional Education Board, 2008). Supporters have

also indicated that many high school students are already attracted to technical careers and students who have access to career technical education dual enrollment programs are more likely to succeed because the curriculum is relevant to their long-term career aspirations (Barnett & Stamm, 2010; Southern Regional Education Board, 2008). Additionally, due to the rigorous curriculum, students not only matriculate to four-year institutions upon completion, but many are able to enter the workforce while pursuing advanced degrees (Barnett & Stamm, 2010; Southern Regional Education Board, 2008).

What does the research say about high school student participation in career technical education programs and persistence? Three studies provide information. The first is Karp and Hughes' (2008) analysis of datasets of two states in a study entitled *Dual Enrollment Can Benefit a Broad Range of Students* (Karp & Hughes, 2008). The study analyzed the results of students enrolled in career technical education dual enrollment programs in Florida and New York City. The study found that for the population of students in Florida, a positive correlation existed for participation and student outcomes. For example, students dually enrolled in career technical education courses, while in high school, were 4% more likely to persist to graduation and 9% more likely to continue their education at postsecondary institutions compared to no participants that share similar demographic factors of socioeconomic status and grade point average upon initial entrance. The study also documented noticeable differences for students enrolled in career technical education curriculum versus the advanced placement curriculum, designed for academically prepared students already on track to matriculate to postsecondary institutions. The most notable differences were recorded with students from lower income families, male students, and students with low-grade point averages upon initial entrance in dual enrollment in career technical education. The differences recorded by the study were higher grade point

averages three years after high school graduation and faster attainment of postsecondary credentials. For students with limited access to postsecondary education, they achieved postsecondary credentials versus their counterparts with the same variables not dually enrolled. The research indicated that there was a need for improved collaboration among secondary and postsecondary institutions with a primary focus directed at more ways dual enrollment can be integrated into existing and new curricular pathways for students (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007, p. 17). The researchers argued that states should direct funding to career and technical education programs and that the relationship between high school and college career and technical education programs be strengthened in order to provide career and technical education students more opportunities to participate in college level courses.

Draeger (2006), described the success of the Miami Valley Tech Prep Consortium, headquartered at Sinclair Community College in Dayton, Ohio (Draeger, 2006). The researcher outlined the approach used by Sinclair Community College to ensure the success of graduates beyond high school and college. She examined the wide range of student services and the extensive support network designed to enhance the student outcomes with professional development of students that yield higher rates of graduation, employment, transfer to senior institutions, and lower rates of remediation. Draeger (2006) concluded that the dual enrollment program success was closely tied to the college's mission to strengthen the state's workforce by facilitating educational change to prepare students for technology-based careers. Moreover, she examined the strong commitment from internal and external stakeholders with collaborative support from secondary education with students allowed to enroll in dual enrollment programs in the 9th grade, demonstrating the positive relationship between collaboration between secondary and postsecondary education. Draeger (2006) pointed out that postsecondary attainment has

long been associated with providing a broad range of benefits to the recipients, including but not limited to economic mobility.

The third study highlighted that, often, dual enrollment of high school students is viewed as a gateway to improving the occupational outlook for students from lower socioeconomic backgrounds (Lin & Vogt, 1996; Laird, Chen, and Levesque, 2006). Laird, Chen, and Levesque (2006) found in their analysis of the National Education Longitudinal Study of 1988 that, nationally, students dually enrolled in career and technical education programs were largely from lower socioeconomic families and these students were more likely to earn postsecondary credentials than students who enrolled in vocational education in high school. The importance of engaging high school students in enriching educational activities and elevating their educational experience, via programs like dual enrollment has been well established in the literature. For example, many supporters of career and technical dual enrollment programs believe enrollment in such programs transform secondary schools to high performing entities (Southern Regional Education Board, 2008). This belief is largely due to improvements to the curriculum that now provide academically challenging course work which is different from the vocational education of the past (Silverberg, Warner, Fong, & Goodwin, 2004). Likewise, due to the changes in the curriculum, more students enrolled in career and technical disciplines now matriculate to four-year institutions upon degree completion (Southern Regional Education Board, 2008). Researchers have also documented that students dually enrolled in career and technical education in high school are already attracted to technical careers and providing access to career and technical dual enrollment programs increase the likelihood of success because the curriculum is relevant to their long-term career goals (Barnett & Stamm, 2010; Southern Regional Education Board, 2008).

In spite of proven benefits of dual enrollment programs, high school students from disadvantaged economic backgrounds infrequently accrue the economic benefits and developmental outcomes associated with high levels of purposeful educational engagement dual enrollment programs provide. According to Silverberg, Warner, Fong, and Goodwin (2004), high schools with a higher enrollment of special population students are less likely to offer career and technical education programs to students. By not having access to career and technical education programs, the influence on labor force participation and future earning potential was noticeable (Silverberg, Warner, Fong, & Goodwin, 2004). Likewise, Mortenson (1997) found that students who pursue postsecondary certification or degrees are not only more likely to participate in the labor market but have more prosperous futures with select higher earning careers (Mortenson, 1997). Comparable results were noted by Lin and Vogt (1996) in their study to determine the occupational benefits of attending a community college versus a high school education alone. They found that students who attended community colleges experienced profitable occupational benefits in labor force participation (Lin & Vogt, 1996). Prior to the 21st century, high school dropouts and individuals with high school diplomas were permitted participation in the labor force. However, in recent years, the lack of postsecondary credentials has resulted in multiple levels of societal stratification as individuals without postsecondary credentials are for the most part restricted to lower wage occupations, as noted by numerous studies.

Morrison (2008) presented a compelling summary of the results of dual enrollment programs and ultimate job placement in Iowa (Morrison, 2008). The author suggested that students enrolled in dual enrollment programs in Iowa were positively influenced because of their participation in high school. The gains included improved student outcomes in overall

graduation rates, matriculation to senior institutions, and successful job placement. Morrison's review of Northern Iowa community college dually enrolled students reported that dual enrollment programs as a whole were essential to improving the pipeline of viable replacement workers for Iowa's aging workforce.

Student Success

The varying approaches to improving postsecondary attainment across the country over the past few decades have generated myriad data useful toward the enhancement of dual enrollment programs. The literature presents evidence which cements the role dual enrollment programs have on eliminating barriers to postsecondary education. For example, policymakers and researchers have focused on identifying the barriers to postsecondary education to advance high school students' transition rates to postsecondary institutions. Numerous authors have written about the complex obstacles students must overcome which are as diverse as the students themselves and the states in which they reside (Watson, 1993; Lewis & Overman, 2008)

The literature on barriers to postsecondary education discusses other barriers and identifies a new challenge, the lack of support from high school guidance counselors (Johnson, Rochkind, Ott, & DuPont, 2010). The study *Can I Get A Little Advice Here? How an Overstretched High School Guidance System Is Undermining Student's College Aspirations* revealed compelling evidence that high school guidance counselors are essential in the matriculation rate to postsecondary education for all students. Parents and students in the study viewed guidance counselors as key to providing insight to changes in the higher education landscape and program offerings such as dual enrollment. According to the study, many students had little to no contact with guidance counselors due to increasing student/guidance counselor ratios and competing professional priorities for guidance counselors. The average ratio for the

school districts represented in this study was 265:1; however, some ratios were as high as 1,000:1. The results indicate that students with little or no contact with guidance counselors were less likely to matriculate to postsecondary education after high school. The most significant finding was that for low-income students and students whose parents did not go to college. The findings also indicated the effects of non-matriculation has long term repercussions years later after high school graduation only a small percent have successfully completed a postsecondary degree, which is in agreement with other research findings (Alfonso, 2006).

Watson (1993) described another obstacle to postsecondary education; a lack of a holistic approach to education that includes expanded student support services (Watson, 1993). Watson argued that student support services should begin in high school to support students' needs beyond their in-class experience. Moreover, in order to help the students, support services should take responsibility for their education. Watson also postulated that student support service professionals at postsecondary institutions are essential to building transitional partnerships that are needed to improve matriculation rates to postsecondary education. Watson further argued that student support service professionals in secondary and postsecondary institutions must work together to design programs to better assist students during their transition from secondary to postsecondary education. One example recommended was for community colleges to collaborate more with their feeder high schools through programs to help students with their transition to higher education (Watson, 1993).

Innovative programs alone are not enough to ensure that students successfully attain postsecondary credentials. Research reported by Kuh et al. (2005) in the book *Student Success in College: Creating Conditions That Matter*, the authors identified six conditions as crucial in establishing environments conducive for student success (Kuh, Kinzie, Schuh, & Whitt, 2005).

The authors examined institutional policies and programs at 20 diverse colleges and universities that have adopted a campus culture of student success and found six common conditions present. The six conditions included 1) “A “living” mission and “lived” educational philosophy; 2) an unshakable focus on student learning; 3) environment adapted for educational enrichment; 4) clearly marked pathways to student success; 5) an improvement-oriented ethos; and, 6) shared responsibility for educational quality and student success. The authors postulated that the six conditions are not independent of one other and their various elements can exist in more than one condition while working in unison to influence their overall effectiveness. As a result, results are measured by student ultimate success due to their exposure to various educational practices at institutions that combine good policies and procedures with positive student outcomes.

Kuh et al. (2005) findings are echoed in other literature. Nunley, Shartle-Galotto, and Smith (2000) found that the institution’s ethos is critical to student success in their recent case study (Nunley, Shartle-Galotto, & Smith, 2000). The authors found that while innovative programs provide critical pathways to postsecondary institutions, students fare better at institutions that not only have strong partnerships with their local school districts but also have student support services in place to help students be successful. Nunley, Shartle-Galotto, and Smith’s research *Working with Schools to Prepare Students for College: A Case Study*, examined the partnership between Montgomery County Public Schools in Maryland and local community colleges. The study found that the collaboration between secondary and postsecondary education removed the additional barriers to student success through four key institutional practices: 1) adoption of common goals for secondary and postsecondary education; 2) share resources; 3) eliminating boundaries for curricula; and 4) overarching institutional objectives.

Draeger (2006) described the success of the Miami Valley Tech Prep Consortium, headquartered at Sinclair Community College in Dayton, Ohio (Draeger, 2006). The author outlined the approach used by Sinclair Community College to ensure success of graduates beyond high school and college. She examined the wide range of student services and the extensive support network designed to enhance student outcomes such as higher rates of graduation, employment, transfer to senior institutions, and lower rates of remediation. Draeger (2006) concluded that the program success is closely tied to its mission to strengthen the state's workforce by facilitating educational change to prepare students for technology-based careers. Moreover, she examined the strong commitment from internal and external stakeholders with collaborative support from secondary education with students allowed to enroll in dual enrollment programs in the 9th grade, demonstrating the positive relationship marking collaboration between secondary and postsecondary education. Draeger (2006) pointed out that postsecondary attainment has long been associated with providing a broad range of benefits to the recipients, including but not limited to economic mobility.

Dual Enrollment Impact on Intellectual Capital

The confluence of a competitive global economy, declines in postsecondary attainment, an aging workforce, and the shortage of younger replacement workers with the necessary postsecondary credentials has created a human capital crisis for many industries in the United States (Carnevale, Smith, & Strohl, 2010; College Board Advocacy, 2008; Berube, 2010; Barnett & Stamm, 2010; Unruh, 2011). Studies have shown that many states have adopted dual enrollment programs as a mechanism to improve the intellectual capital of its citizens in hopes of advancing both the state and the individual's economic outlook (Thomas, Marken, Gray, &

Lewis, 2013; College Board, 2007; College Board Advocacy, 2008; Dare, 2006; Southern Regional Education Board, 2008).

The economic landscape in the United States has seen volatile changes over the past three decades with measurable differences noted in labor force participation and earnings for workers without postsecondary credentials. The educational level of citizens is often viewed as critical to economic vitality (Center for Leadership and Public Policy, 2011; Vargas, 2013) is viewed as a significant part of an infrastructure needed to promote economic growth and job development. Leveraging the power of collaborative education relationships provides secondary and postsecondary institutions platforms to deliver a workforce more prepared to meet future employment demands (College Board, 2007; Vargas, 2013). Researchers have explored the benefits of collaborative education relationships and have outlined key lessons learned to improve postsecondary completion rates (College Board, 2007; Vargas, 2013).

Vargas (2013) illustrated the efficiency and increased productivity of shared operational and administrative services of secondary and higher education spending in a cost-to-spending model (Vargas, 2013). The effect to efficiency is attributed to three factors:

- 1) States per student expenditures are reduced as dual enrollment advances college readiness and completion;
- 2) Less per student expenditure by the state because dual enrollment allows students to spend less time in college since they have earned transferable credits to be applied towards a degree program; and
- 3) Dual enrollment produces the largest efficiency gain when it targets low-income students and other underrepresented students.

According to Vargas (2013), these benefits have longer term returns on investment due to increased contributions to local and state economies as the result of gainful employment in higher income careers directly associated with postsecondary degree attainment.

Becker (1993) concluded that young adults without postsecondary credentials are not adequately prepared to participate in modern economies (Becker, 1993). Moreover, he cited credentialism as the basis for his argument. A credentialism approach to labor force participation has spread extensively over the past decades due to modern economies' dependence on technological advances gained from postsecondary exposure which provides competitive advantages in the marketplace (Becker, 1993).

In today's economic environment, postsecondary credentials equal opportunity. Many researchers have documented that postsecondary credentials are vital to an individual's health and family economic security, as well as to the continuation of democracy and the American dream (Lumina Foundation, 2012; Becker, 1993; Haveman & Smeeding, 2006; Carnevale, Smith, & Strohl, 2010). In a recent study, *Reaching America's Health Potential: A State-by-State Look at Adult Health*, researchers expanded the human capital theory by further examining the impact education has on human capital as it relates to overall health (Robert Wood Johnson Foundation, 2009). The researchers compared data collected by the U.S. Census Bureau in the 2007 American Community Survey to data collected by the U.S. Center for Disease Control's 2005-2007 Behavioral Risk Factor Surveillance System Survey.

The study compared adult health status to social factors that included education level, income level, and racial or ethnic group. The research also presented compelling evidence of three important social factors to an individual's human capital: 1) educational attainment; 2) income as it relates to occupational attainment; and 3) racial or ethnic group. The key finding

was that a positive correlation exists between education and corresponding income. In addition, education levels are predictive of overall good health. The study found “higher educational attainment can lead to higher-paying jobs with greater economic security, healthier working conditions and better benefits including health insurance” (p. 11). Further, education and income were found to be the critical resources needed to reduce health disparities. The study surmised that expanding access and educational opportunities can make notable differences in adult health as well as economic and social mobility. The researchers further concluded that adults who did not graduate from high school were “2.5 times as likely—and those who have graduated from high school are nearly twice as likely—to be in less than very good health” (p.11) compared to college graduates, espousing the benefits of educational attainment. Expanding opportunities for educational attainment can make dramatic differences in adult health and welfare, as well as, increase economic productivity. Furthermore, improved adult health extends to the family and ultimately improves the health of a democratic society because a “nation’s health is its most precious asset” (p. 7).

In *Getting Ready, Getting in, and Getting Through College: Expanding Options for Low-Income Students*, the College Board made several proactive recommendations to improve matriculation rates for low-income students. The recommendations included, but were not limited to the following: 1) develop K-12 outreach programs and higher education programs to overcome the academic barriers of under-preparedness; 2) develop plans to overcome financial barriers many low and moderate income students face; 3) improve student expectation with programs designed to foster educational and career aspirations for the students; and 4) make changes in the recruitment activities of higher education institutions (College Board, 2007).

Educational and career aspirations and subsequent occupational attainment for students are critical components for reaching social status and social mobility as well as the lifelong benefits to the individual's human capital. Improvements will require collaborative efforts of all stakeholders at every level in the educational process (College Board, 2007; Haveman & Smeeding, 2006; Robert Wood Johnson Foundation, 2009; Nunley, Shartle-Galotto, & Smith, 2000). Many believe that such efforts will also require creative thinking as well as bipartisan, cross-cultural, and multi-socioeconomic approaches to make tough decisions in order to reap the rewards at a later date.

Bloom (2008) posited that the pedagogy of college access programs should be redesigned stating that "today's college access programs should design interventions that are cognizant of the fact that there are profound differences between low and high-income students ... and the social and cultural capital are needed in order to gain access to college" (p. 6). Other researchers suggested improving various high school bridge programs, TRIO, Upward Bound, GEAR UP, and dual enrollment (Kahlenberg, 2004; Hudson and Laird, 2009) to improve the nation's graduation rate.

There has been empirical and theoretical research on the human capital theory which put forward that educational levels have a strong correlation to economic and social mobility which are closely tied to occupational status (Becker, 1993; Blau & Duncan, 1967). Almost 50 years ago, Becker (1993) first examined human capital theory to approximate the monetary rate of return for postsecondary attainment and found that education and training are the most important investments for an individual's human capital (Becker, 1993). He also examined earnings for populations in over 100 countries at various points in time and compared education levels to financial security, as well as, non-monetary impact. The key findings were that the education

levels of the individual were predictive of financial success for all socioeconomic statuses.

Becker (1993) additionally put forth that education adds predictive accuracy for improved health, civic involvement, and family stability even after the direct and indirect costs of education are accounted for. The perpetual benefits of education are observed in each generation as educated parents have higher expectations for education attainment for their children. Becker's findings have been echoed by subsequent researchers throughout the next four decades.

For example, Blau and Duncan (1967) researched the status attainment process for adult males in America. Their empirical research concluded that having an influential family background provided by the father (which was a combination of the father's education and occupation) was an important factor in the status attainment of the son; however, it was not the primary factor for occupational status (Blau & Duncan, 1967). The study theorized that men from wealthy families simply had more resources to provide access to education for their sons, which in fact was the true reason for status attainment. Moreover, the financial stability of wealthy families contributed to higher expectations for educational achievement resulting in occupational prestige and higher wage occupations for the sons. The research completed by Blau and Duncan became the cornerstone used to further build occupational attainment models.

Research completed by Sewell, Haller, and Portes (1969) built on the Blau and Duncan status attainment model (the Wisconsin model) by adding social psychological variables, measured in high school, such as mental ability and academic performance which attribute to status attainment (Sewell, Haller & Portes, 1969). Moreover, this research also added the influence of others such as parents and friends and the level of educational and occupational aspirations to the variables affecting occupational attainment in the pathway analysis performed in their research. The results suggested that social psychological variables influence status

attainment and upward social mobility. This study was the first to indicate that these influences are measurable in high school.

The foundational and subsequent research performed during the 1960s through the 1980s agreed that the critical variables for status attainment were educational aspirations and how it is negotiated is due in part to social and cultural capital (Bloom, 2008). Bloom (2008) posited that educational attainment is rooted in social and cultural capital gained over a lifetime. She argued that high school students of today aspire to achieve postsecondary education but the differences in the social and cultural capital, limits their knowledge of how to navigate the higher education landscape and socioeconomic status affects their aspiration levels. Moreover, the difference in educational aspirations is the biggest impediment for social and economic mobility with a corresponding negative influence on status attainment specifically for lower socioeconomic students.

Findings by various researchers have identified major influences on educational and career aspirations faced by lower socioeconomic students, citing positive and negative influences that are traceable to the social psychological variables of the Wisconsin model, particularly other influences. The other influences identified were 1) for lower socioeconomic students, their friends' educational aspirations had a profound effect on their matriculation decisions (Ad Council, 2006; and 2) high school counselors had a positive effect on matriculation decisions when they provided college-related information to students (McDonough, 1997). However, for low-income students, this information is not readily disseminated due to high student-counselor ratios (Corwin, Venegas, Oliverez, & Coluar, 2004). Secondary educators influence matriculation decisions with research results that depict less academic support and instructional time for lower socioeconomic students (Rist, 2001). The condition of the community and the

classroom in schools located in lower socioeconomic neighborhoods negatively affect educational aspirations. Financial barriers prohibited thousands of fully-prepared low and moderate-income high school graduates from pursuing higher education due to shortfalls in grant aid (Haveman & Smeeding, 2006; Kahlenberg, 2001; Advisory Committee on Student Financial Assistance, 2010).

Gap in the Literature

In recent years there has been an increased focus on dual enrollment. Prior studies have generally focused on the influence on student's persistence to graduation. The literature presents evidence which cements the role dual enrollment programs have on eliminating barriers to postsecondary education. Researchers have documented that postsecondary credentials are vital to an individual's health and to family economic security (Robert Wood Johnson Foundation, 2009). Additionally, there has been empirical and theoretical research on human capital theory that suggests that educational levels have a strong correlation to economic and social mobility (Becker, 1993; Blau & Duncan, 1967)

Much has been written about the positive benefits for students that participate in dual enrollment programs; however, the current literature does not identify established best practices that lead to higher student participation. Despite the increasing participation of dual enrollment programs, little is known about the process by which successful high schools implement their programs to increase student participation. Therefore, the gap in the literature, which is the identification of the salient actions and cultural beliefs at high schools in the state of Alabama which have successful student participation in dual enrollment programs, were addressed in this study. In addition, this study sought to improve the understanding of how these high schools implement successful dual enrollment program participation among their students.

Theoretical Framework

The various definitions, outlined in the book *Theoretical Framework in Qualitative Research*, for the theoretical framework, posit the importance of the theoretical framework in providing the edifice that strengthens the research study by illuminating a theory that explains why the research problem occurs and adds to the understanding of the phenomena (Harris, 2006). Generally, the theoretical framework acts as a lens to interpret the data, sieve for the organization and sorting of the data, roadmap to guide the research, and guide to inform the research. The theoretical framework utilized for this study focused on the Partnership Model (Amey, Eddy, & Campbell, 2010).

The Partnership Model informed the research questions. Central to this theoretical framework is the assertion that social and organizational capital in partnership development facilitates sharing arrangements and aid in more effective strategic alliance between education sectors that better address educational and workforce needs of a state. This framework will allow me to address the constant “so what” question to provide structure and definition to the research experiences (Harris, 2006). Additionally, the Partnership Model highlights the critical factors that exist in the creation of collaborative educational partnerships with different organizational structures. This framework utilizes the formation of shared vocabulary and shared definitions for success to stabilize the differences in the organizational structures of secondary and postsecondary institutions (Amey, Eddy, & Campbell, 2010). Moreover, the Partnership Model informs that the primary differences between education sectors (governing boards, curriculum, and organizational structures) require agreed upon goals permitting each sector to enact the goals different for uniform outcomes (Amey, Eddy, & Campbell, 2010). For example, partnership agreements in dual enrollment programs not only provide cost savings to

both institutions but also provide seamless pathways for students to attain postsecondary credentials via the use of course credits (Amey, Eddy, & Campbell, 2010).

The theoretical orientation of the Partnership Model was used as a roadmap to guide this research in data collection and data analysis (Amey, Eddy, & Campbell, 2010). It was used as a guide to inform the research concerning the problem, purpose, and research questions.

Additionally, the Partnership Model acted as a sieve in sorting through data. Lastly, the Partnership Model was used as a lens, the unifying system through which the organizational structure at a public high school will be viewed (Harris, 2006). A lens that aided in the prioritization of research activities and assist in the interpretation of the research findings.

Conclusion

This chapter reviewed literature relevant to secondary dual enrollment programs at public institutions in the United States. The literature related to public policy and its influence on student matriculation to postsecondary as well as, literature outlining program successes were also reviewed to illustrate that dual enrollment programs eliminate barriers to postsecondary degree attainment. Over the past few decades, researchers have documented that through the integration of education programs, the collaborative partnerships effect, not only degree attainment for all student populations but the state's workforce initiatives as well. This study presents a profile of institutional practices at a high school with high student participation in dual enrollment programs in the state of Alabama. The next chapter will explain in detail the methodology which were used to achieve these objectives.

CHAPTER III:
METHODOLOGY

Introduction

I sought to ascertain the salient actions and the inherent educational practices of public high school administrations in the state of Alabama which have high student participation in dual enrollment programs. I also sought to improve understanding of how a high school garners support for dual enrollment program participation among its students. While much has been written about the benefits to students who participate in dual enrollment programs, the current literature did not identify established practices that lead to higher student participation. This study instead gave a voice to high school administrators in order to understand the organizational practices that lead to higher student participation.

The research methodology of this study will be discussed in this chapter. The essential sections in this chapter include a restatement of the research questions presented in Chapter I followed by an overview of the setting in which data was collected. Also included is a discussion of the participants selected to participate in this research and the methods and overall design of the study. A careful illustration of the procedures used for data collection and analysis are discussed. Finally, the chapter ends with the timeline I followed by the ethical consideration guiding the study and close with my positionality.

Research Questions

The following research questions guided this study:

- 1) What were the strategies the high school used to attract students to participate in dual enrollment programs;
- 2) How did the high school assist students in successfully completing dual enrollment programs; and
- 3) What challenges does the high school face in the implementation of dual enrollment programs?

Setting

In order to ascertain the patterns of shared assumptions, beliefs, and values needed to answer the research questions, the data were collected in its natural setting. Creswell (2013) noted that collecting data in the natural setting where participants experience the phenomenon provides the researcher with an up-close viewpoint (Creswell, 2013). A natural setting also provided a clear perspective of the participating high schools' enacted values, their physical structures, shared language, rituals and ceremonies, and the gathering of stories and legends.

This study was conducted on the campus of a public high school in the state of Alabama. According to the Alabama State Department of Education, August 21, 2015, Alabama had 504 high schools and 63 career/technical centers with 220,936 students enrolled (Alabama State Department of Education, 2016). This study focused its attention upon one of the high schools which has a sizable percentage of students involved in dual enrollment. Holtville High School is the pseudonym used for the high school chosen as the research study site. The total number of students enrolled at the high school for 2015-16 academic year was less than 800. The high school was located in a city with less than 50,000 residents.

Sampling Approach

According to Merriam (1998), “purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight” regarding the phenomenon; therefore, the researcher must select a sample of people who can inform the researcher with the data necessary to answer the research questions (Merriam, 1998 p. 61). The type of purposeful sampling strategy adopted for this study is “unique sampling.” Merriam (1998) noted that unique sampling is based on a need to isolate individuals who have a unique and specific knowledge related to the purpose for which the research is directed.

For this study, I used purposeful sampling to select the participants of the study. Purposeful sampling was adopted because it allowed me to select the high school to visit that informed our understanding of the research problem (Creswell, 2013). Purposeful sampling allowed me to pick the participants who could provide the most informative data on enacted values and provide an understanding of dual enrollment program implementation. Purposeful sampling ensured that the participants who knew a lot about dual enrollment program implementation and who had a close experience with the dual enrollment program were interviewed to ensure multiple viewpoints were captured in the research.

The criteria used for purposeful sampling was the job title, job description, and a higher level of involvement in student dual enrollment participation. The job title ensured the most appropriate individuals were selected to be interviewed. The job description ensured that the participants who have direct knowledge and participation in dual enrollment implementation were interviewed. The site visited was primarily selected based upon participation in dual enrollment programs. The site was also selected because the student body, demographic and

socioeconomic status of the student population was representative of the state's public-school population.

Participant Selection

No students were participants in this research. The participants in this study were high school administrators, guidance counselors, and teachers at a public high school in Alabama. High school administrators typically include a principal and an assistant principal. The number of assistant principals and guidance counselors at a high school is based on student enrollment. Teachers were selected based upon their involvement in dual enrollment activities. Particular attention was focused on the role each employee has in initiating student participation in dual enrollment.

In adherence to the reauthorization of Elementary and Secondary Education Act in 2015, Alabama adopted performance targets to ensure high school graduates are both college and/or career ready by the year 2020. Performance targets were also adopted to close the achievement gap for varying student populations. The performance targets adopted six factors: 1) ACT exam benchmark score on at least one section; 2) a qualifying score on International Baccalaureate or Advance Placement exams; 3) receiving postsecondary course credits while in high school; 4) at benchmark on ACT WorkKeys; 5) obtaining an approved industry credential; or 6) enlistment in the military (Alabama State Board of Education, 2016).

The results for how the high schools are progressing in reaching the performance targets are housed in a public facing data system on the state Department of Education's website (Alabama State Board of Education, 2016). The database is named Plan 2020 Dashboard (Dashboard). The performance results are listed as the percentage of the student population that reach the performance targets. The interactive Dashboard includes the results aggregated by

state level, school districts, and individual high schools, which includes all six performance factors. The Dashboard permits the disaggregation of the results to single out factors by state level, school districts, and individual high schools. Holtville High School is the pseudonym used for the high school chosen as the research study site. A profile of Alabama graduates and Holtville High School graduates for the 2015 academic year is listed in Table 1. Since this study focused on postsecondary credits awarded, factor three, receiving postsecondary course credits while in high school, was selected as the primary filter used to narrow the high school selection based upon higher student participation in reaching this performance target.

Table 1

Alabama Profile for College and Career Readiness 2015 Academic Year

Graduates	Holtville High School	Alabama
ACT	55%	54%
International Baccalaureate (IB)	<1%	<1%
Advance Placement (AP)	6%	11%
Postsecondary credits	36%	7%
WorkKeys	50%	52%
Industry credential	2%	11%
Military enlistment	2%	1%
Overall	69%	70%

Source: Alabama Department of Education Plan 2020 Dashboard

The second filter for the selection of a high school for inclusion in the study was the use of a report from the Alabama Commission on Higher Education that provides matriculation results for each public high school in Alabama. This report lists the in-state receiving public postsecondary institutions and the number of graduates matriculated from each public high school. The final filter was demographic information of the student population (race,

socioeconomic, and gender). This filter was selected to ensure the research captures educational practices for a cross-section of Alabama high school students. Two reports from the Alabama Department of Education were used to obtain the necessary data for this filter (*Free and Reduced Lunch Report* and *Enrollment by System, School, Sex, and Race Report*). The *Enrollment by System, School, Sex, and Race Report* provides a profile of the high school, listing a breakdown of enrollment by race and sex. The *Free and Reduced Lunch Report* provides the socioeconomic profile of the high school by listing a breakdown of enrollment of students receiving free or reduced lunch.

Methodology

A case study is the most appropriate method for filling the gap in the literature, answering the research questions, and fulfilling the purpose of this research. According to Yin (2009), “a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2009 p.18). Creswell (2013) added that a case study usually includes individuals, organizations, small groups, or partnerships. Merriam (1998) noted that a case study is an analysis of a single unit or system, bounded by time and space (Merriam, 1998). According to Stake (1995), there are three types of case studies: intrinsic, instrumental, and collective (Stake, 1995).

The intrinsic case study is used when the researcher has an inherent interest in the case (Stake, 1995), meaning that the researcher is interested in the case for its own merits. The instrumental case study is used when the researcher is interested in a question or has a need to understand something and sees a case study as the means by which to gain an understanding. The collective case study is used to study several individuals, programs, or other entities

instrumentally in order to learn about a specific question that the researcher is interested in. This study employed the instrumental case study because we are looking for elements of institutional practices to share with respect to dual enrollment program implementation.

Research Design

Using case study research methodology, the focus of this study was to identify patterns of shared assumptions, beliefs, and values, in addition to daily practices and strategies adopted, in order to answer the research questions. The case study was selected because it allowed me to directly observe events being studied and allows direct interviews of the key personnel involved. Yin (2009) noted that the strength of case study research methodology is its ability to allow the researcher to include a variety of evidence when researching contemporary events (Yin, 2009). Particularly, Yin (2009) noted that the case study design works well within a community when a collective viewpoint is needed for the data to properly answer the research questions.

The crucial strengths of this study are the holistic account of the phenomenon that the real-life research provides (Merriam, 2009). The vivid portraits captured will also provide insights and understandings into the implementation of high school dual enrollment programs. The descriptive narrative of the research provided a prototype for the duplication of results at other Alabama high schools. Several factors contributed to the strength of the methods chosen for the research. First, thoroughness and accuracy are embedded in the interview process to provide credible results (Rubin & Rubin, 2005). Follow-up questions were asked to ensure thoroughness. Likewise, the research design was flexible enough to allow the interviewing of additional participants other than the ones initially identified as being the most knowledgeable.

Another factor that contributes to the strength of the research design is the believability of the data obtained (Rubin & Rubin, 2005). Participants are afforded as much control as possible

over the research process to help alleviate any anxiety and to encourage openness during the interview. I shared background information about the study to the participants. Also, I shared her personal background to develop a rapport with the interviewees. The interview protocol was shared with the participants and included the following disclosures: 1) participation is voluntary; 2) no identifying information will be gathered on the participants; 3) the participants will be informed that they can withdraw from the research at any time; and 4) a contact name and number will be given to report any complaints about me, the researcher.

Redundancy is built into the research design to ensure credible and believable results (Rubin & Rubin, 2005). Redundancy was captured by asking some of the same questions to multiple individuals in separate roles to ensure consistency. Different viewpoints were solicited in order captured a fuller understanding of emerging themes.

In summary, the use of case study research methodology offers a means of investigating the complex social unit at a public high school (Merriam, 2009). The complex social unit consists of multiple variables of potential importance in understanding the factors that influence dual enrollment participation.

Data Collection Procedures

In order to answer the research questions presented in the study, an interview protocol was developed (see Appendix C). The researcher collected data during a weeklong site visit the last week of April 2017 and follow-up interviews were conducted during the first week of May 2017. Data was collected at the natural setting at a public high school in Alabama. The collection of data included twenty-six recorded interviews, the collection of artifacts, the observation of staff meetings, and the observation of daily activities without students present.

The researcher made observational notes during the onsite visit and recorded the researcher's impressions and experiences on an observation protocol (see Appendices D and E).

The data collection proceeded in the following manner. Approximately 40 hours was devoted to all data collection procedures for this research. A one-hour interview with each participant was conducted with each of the participants in the study. A fishbone diagram was used during the interviews to quickly sort ideas into identifiable categories. The fishbone diagram also provided a visual look at codes as they were occurring and directed follow-up questions based upon the emerging categories. A half hour follow-up interviews was conducted with participants for clarity of information obtained.

Three hours for observation of daily work administration without students present was collected. These observations included staff meetings, campus walk-throughs, and monitoring of guidance counselors. The third form of data collected was gathering documents for analysis. Approximately ten hours was devoted to collecting and sorting documents: strategic plans, mission statements, letters to parents, public relations, marketing material, and instructional materials.

Data Transcription and Storage

Accuracy was ensured by not relying on memory to record the data (Rubin & Rubin, 2005). All interviews were recorded with the consent of the participants. The researcher transcribed the interviews as soon as possible after the interviews to ensure the experiences of the interviewees were accurately reflected in the findings. Source documents were converted to electronic documents. All data obtained was stored responsibly in a locked file cabinet at the researcher's home. Backup electronic files were generated and all of the data was encrypted to provide another level of security.

Data Analysis Procedure

The data were analyzed in several phases (Rubin & Rubin, 2005). The data analysis of this dissertation implemented Saldaña's (2010) three cycle coding strategy to answer the research questions. Saldaña (2010) noted that the use of codes helps the researcher summarize and condense data. According to Saldaña (2010), one of the primary goals of the coding process is to find repetitive patterns of actions and consistencies in behavior that will be used in the following chapters to convey the research findings. The cyclical act of coding the data focused on the salient features needed to generate categories, themes, and concepts present in the data.

The first coding cycle began the transitional process between data collection and data analysis (Saldaña, 2010). Elemental methods were used to address the research questions. Elemental methods has five coding strategies. Three were adopted: structural coding, descriptive coding, and in vivo coding. I began with in vivo coding of the interview transcripts. In vivo coding was selected because it helps researchers become attuned to the language, perspectives, and worldviews of the participants. Also, included in the first coding cycle was the use of descriptive coding for artifacts gathered to provide a detailed inventory of the content. Structural coding helped me to organize the codes to answer specific research questions. In vivo and descriptive coding allowed me to convey a vivid portrait of the salient actions and cultural beliefs held by the community to promote dual enrollment participation.

During the second coding cycle, I used the codes identified in the first cycle to develop coherent, categorical, thematic, and conceptual topics (Saldaña, 2010). Pattern coding was used to pull the emerging themes into a more meaningful and parsimonious unit for analysis. Throughout the second cycle of coding, after I had answered the "why" questions in the research,

I gained an understanding of “what” enacted values were used at the high school and “how” those enacted values related to student participation in dual enrollment.

The final stage of the coding cycle was post-coding and pre-writing. Code weaving was used to investigate how the themes interrelated and determine the causality of themes to present a holistic view of the data. I arranged the most salient ideas that emerged from the data and begin to compose the findings in chapter four (Saldaña, 2010). The “touch test” strategy was used to aid in the progression from topic to concept and from the particular to the general.

Analytic Memos

This study utilized analytic memos to organize the research data and document research discoveries that were used to form the foundation for composing Chapters IV and V. “The purpose of the analytic memo writing is to document and reflect on the coding process and the code choice, how the process of inquiry is taking shape, and the emergent patterns, categories, subcategories, themes, and concepts in the data” (Saldaña, 2010, p. 33). Analytic memos also aided me in tracking the progression of the research. Furthermore, “analytic memo writing serves as an additional code and category generating method” (p. 41).

Saldaña (2010) further noted that the act of coding data and writing analytic memos happens concurrently in the analytic process and helps the researcher understand the phenomenon by labeling and classifying memos into different subcategories (Saldaña, 2010). Each subcategory should then be characterized into four areas in accordance with their purpose: theoretical memos, coding memos, task memos, and research question memos. Writing analytic memos with breadth and depth in content can be merged into substantive portions in the final chapters of the study.

I composed theoretical memos to capture themes that are developed from the research data. Data that present ideologies which were not covered in the literature review section were listed in the analytic memos. These missing literature review elements were summarized in order to capture ideas for possible future research actions (Saldaña, 2010).

Coding memos were written to list and group codes into five or six broader concepts. The emergent categories, themes, patterns, and concepts were captured in these memos. Additionally, coding memos captured code weaving to summarize how the research pieces fit together. I constructed diagrams to illustrate the connectivity between concepts (Saldaña, 2010).

Task memos were written to enable me to reflect on the coded data and provide instruction for performing additional tasks to aid in the understanding of the phenomenon. For example, if follow-up questioning was needed to gain a fuller understanding of the participant's response, it was documented in the analytic memos. Also documented in the analytic memos was reflective thoughts on how I relate to the participants as well as the phenomenon. Analytic memos served the function of assisting me in better understanding the participants' perspectives and worldviews (Saldaña, 2010).

Research question memos were drafted for each of the research questions answered in this study. The codes were listed on the corresponding analytic memo, separated into five or six one word or one phrase concepts which served as the genesis for Chapters IV and V of this research study (Saldaña, 2010).

Timeline of the Study

I retrieved data on dual enrollment participation from the Alabama Department of Education and the Alabama Commission on Higher Education provisionally upon acceptance of the research proposal in March 2017. After selecting the high school that fit the profile of the

study, an email was sent to the high school requesting its participation in the research study. Upon acceptance, I scheduled onsite visits in April 2017. I began the analysis process in May 2017. The findings and conclusion were written and presented for defenses in late September 2017.

Validation of the Study

In order to mitigate any researcher biases that might have crept into the study, this study applied five validation strategies to ensure the trustworthiness of the findings (Stake, 1995). The first strategy was member checking. The second was expert analysis. The third was researcher positionality. The fourth was negative case analysis. The fifth was triangulation.

According to Stake (1995), member checking is the external verification of the accuracy and credibility of data obtained by allowing the interview transcript to be reviewed by the participants (Stake, 1995). For this validation strategy, I allowed the participants to review their interviews and provide an opportunity for feedback. I also shared with the participants a description of the themes to be used in the research. By allowing the participants to reflect on their interviews, member checking ensured my account of the interviews was accurate.

The expert analysis involved the assessment of the research design, data collection, data analysis and findings by an expert in the field of methodology (Creswell, 2013). For this particular study, the methodologist served on the dissertation committee.

Researcher positionality clarified my biases with respect to the issues involved in the research (Creswell, 2013). As such, the reader of the research was afforded an opportunity to assess the quality of the findings based on the information stated in the positionality statement.

Creswell (2013) noted that negative case analysis occurs when some data collected does not fit the patterns or themes in the coding process; this data “provides a realistic assessment of

the phenomenon under study” (p. 251). I understand that not all data confirmed the research findings. For this validation strategy, I included negative case data as outliers in the written report to offer the reader the different perspectives obtained.

According to Merriam (2009), triangulation occurs when the multiple sources of data are “compared and cross-checked through observation at different times, in different places, or by interviewing people with different perspectives, or from follow-up interviews with the same people” (Merriam, 2009, p. 216). For this validation strategy, I verified the findings from multiple data sources to validate their trustworthiness. The second form of triangulation, known as participant triangulation, was also employed as a means of validating the trustworthiness of the findings.

Ethical Consideration

Ethical consideration was addressed by ensuring the privacy of the participants was maintained. The following ethical considerations ensured participants’ privacy: 1) no one had access to the recordings, transcripts, or field notes other than me; 2) all recordings, transcripts, field notes, and documents were housed under lock and key in my home; 3) I did not discuss the contents of the interviews, observations, or documents with any other individuals; and 4) all documentation will be destroyed after five years. The anonymity of the participants was protected by the following means. Pseudonyms were assigned as additional safeguards employed to protect the participants’ and the high school’s identities. Safeguards were used in accordance with the interview protocol (see Appendix C). The interview protocol was developed to communicate to the study participants the objectives of the research. The following ethical considerations were included in the interview protocol: 1) no identifying information will be disclosed about the high school; 2) no identifying information will be gathered or disclosed about

the participants; and 3) the participants will be informed that they can withdraw from the research at any time.

Researcher Positionality

After spending 18 years in the banking industry, I changed industries and transitioned into education. I was hired as a professional auditor for the Alabama Community College System (System). During my seven-year employment at the System office, my job responsibilities included not only auditing the various functional areas at system colleges, but also participating in audits completed by outside agencies. Additionally, my job required me to attend board meetings, board work sessions, staff meetings, and committee meetings. I often reviewed workforce development reports, student enrollment reports and attended various presentations on higher education topics including dual enrollment. This level of exposure provided a macro view of higher education, particularly at the community college level. Therefore, because of my background as a system auditor, I have a fundamental understanding of dual enrollment from the postsecondary viewpoint.

As a former employee, I learned the policies and procedures that govern the day to day operations of the System office and the colleges. I also understand the collaborative relationship between secondary and postsecondary systems of education. My span of employment provided a needed understanding of the state's workforce initiatives and the role which dual enrollment in career and technical fields play in moving the state forward.

Dual enrollment participation was chosen as the topic for discovery because after many years of volunteering at various faith-based organizations, I now associate poverty with some causal relationships. For example, I associate the lack of living wage employment to the lack of postsecondary credentials, the lack of postsecondary credentials to the lack of ability to pay for

tuition, books, and fees. I was attracted to this topic because I believe in the transformational power of obtaining postsecondary credentials. It is my philosophical belief that postsecondary credentials provide one pathway to end poverty.

Conclusion

In this chapter, the methodological needs for this dissertation were described to provide an overview of the approach that was used to answer the research questions. The research methodology discussed was qualitative, and procedures and techniques from case study research orientations guided the inquiry. A case study was the most appropriate method for filling the gap in the literature, answering the research questions, and fulfilling the purpose of this research. The use of a case study research method offered a means of investigating a complex social unit in a public high school (Merriam, 2009). The complex social unit consists of multiple features of potential importance in understanding the factors that influence dual enrollment participation.

The research setting helped me discover the patterns of shared assumptions, beliefs, and values needed to answer the research questions. The data was collected in the natural setting. I used purposeful sampling to select the participants to participate in the research. Purposeful sampling was adopted because it allowed me to select the high school to visit that purposefully informed our understanding of the research problem. Purposeful sampling also allowed me to pick the participants that could provide the most informative data on enacted cultural values and provide an understanding of dual enrollment program implementation. The participants included in this study were the high school administrators, guidance counselors, and teachers at a public high school in Alabama. No students were interviewed and no students were observed.

The research design employed an instrumental case study because we are looking for the elements of educational practices to share with respect to dual enrollment program

implementation. The data analysis of this dissertation implemented Saldaña's (2010) three cycle coding methodology to answer the research questions. For data collection, an interview protocol was developed in order to answer the research questions presented in the study. I applied five validation strategies to ensure the trustworthiness of the findings: member checking, expert analysis, researcher positionality, negative case analysis, and triangulation. Ethical consideration was observed by assuring the privacy of the participants was maintained. Pseudonyms were assigned as additional safeguards to protect the participants' and the high school's identity. This study used analytic memos to organize the research data and document research discoveries that were used to form the foundation for composing Chapters IV and V.

CHAPTER IV:

FINDINGS

Introduction

This chapter summarizes and elaborates upon the major themes reported by the participants of this study. This case study involved one public high school in the state of Alabama. The high school was visited in April and May 2017. Research activities included a systematic collection of data from personnel interviews, observations, pamphlets, diagrams of bulletin boards, diagrams of public spaces, and examination of public documents, as seen in Table 2.

The Alabama Department of Education's Quick Facts Report was used to develop a profile of the public-school enrollment in Alabama for the 2015 academic year, as seen in Table 3. The Plan 2020 Dashboard was used to select a high school with graduates completing college credits during the 2015 academic year. The Alabama Department of Education *Enrollment Report by Ethnicity and Gender School Level Report* and the *Free Lunch by System and School Report* was used to develop a profile of the high school's student enrollment. The student body, demographic and socioeconomic status of the selected high student population was representative of the state's public-school student population as seen in Table 3.

I examined institutional practices of dual enrollment program implementation. An analysis of the data presented valuable insights to institutional practices that promote dual enrollment participation. Prominent to all of the institutional practices was the importance of relationships as the high school staff is believed, by many of the respondents, to be an extension

of the students' family. The results described in this section highlight innovative institutional strategies, policies, processes, and practices that yield encouraging results.

Holtville High School is the pseudonym used for the high school chosen as the research study site. The high school employs dual enrollment programs to help generate interest, participation, and the achievement of postsecondary credentials for its students. Based on the responses to the research questions, dual enrollment is viewed as one critical pathway to postsecondary institutions and is credited for 36% of graduates completing college credits during the 2015 academic year, and 61.67% of the graduates matriculated to postsecondary institutions, as seen in Tables 1 and 3. A significant percentage of these students were from low to moderate income families as seen in Table 3. A profile of Holtville High School matriculation compared to the state matriculation is provided in Table 3.

Table 2

Data Collection Activities at Holtville High School Site Visit

Activities	
School tour	Included entire campus
Observations	Included morning announcement, school assemblies, and student interactions
Bulletin board diagrams	Six, highly visible, placed throughout the school
Collection of printed materials	<p>Career technical education high school brochures (automotive technology, therapeutic services program, business marketing education programs, cooperative education, welding technology program, business management administration, electrical program, and health science program)</p> <p>Printed guidelines for the FAFSA application (8 Steps to Filling Out the FAFSA and a Flow Chart of the FAFSA process)</p> <p>Teen guide brochures (How to Get the Most Out of School, Resisting Pressure to Join Gangs, 10 keys to Success, Effective Study Skills, and Motivational Tips for Success)</p> <p>Anti-drugs brochures (cannabis and cocaine)</p> <p>Focus – Alabama students making a Difference brochure</p> <p>Potential magazine: A College Organizer</p> <p>Rules for attending the Academic of Excellence Banquet for all students</p> <p>Alabama College Application Campaign – Certificate of Participation awarded to Holtville High School</p>

Copy of the letter sent to parents for the Freshman Academy with the schedule of events

Included the main entrance to the high school, hallways, stairways, cafeteria, library, and doorways. Also included coping signage

Documents on the high school's web page (scholarship announcements, college and university announcements, upcoming event announcements, school newsletter, and the district newsletter)

Alabama Department of Education Reports (Enrollment Report by Ethnicity and Gender School Level Report, Quick Facts, Plan 2020 Dashboard, and Free Lunch by System and School Report)

Diagrams of public spaces

Alabama Commission on Higher Education Reports (Enrollment Summary Report of Alabama Public High School Graduates into Institutions of Higher Education using National Student Clearinghouse Report, High School Feedback Reports).

Examination of public data

Interviews

William Powel, Superintendent	Dan Smith, Principal (2 interviews)
Vincent Goode, Asst. Principal	Marsha Bass, Guidance Counselor (2 interviews)
Claire Scales, English Teacher	Angela Scott, English Teacher
Amanda Thomas, Science Teacher	Michael Whitt, Coach, Career Academy Teacher, and Business Education Teacher
Donna Edwards, Learning Specialist	Kent Moss, Music and Drama Teacher
Mary Kate Sloan, Math Teacher	
Myra Dixon, Math	Dianne Lewis, Math Teacher
Edgar Booth, Spanish Teacher	Ashley Bennett, History Teacher
Kimberly Clark, Science Teacher	Lori Ann Spicer, English Teacher
Karl Griffin, Social Studies Teacher,	Raymond Lee, Government, Economics Teacher
Janice Kessler, Science Teacher	Samantha Jackson, Learning Specialist
Reva Biggs, English Teacher	Madison Starks, Learning Specialist
Beth Miller, AP Math Teacher	Marisol Vargas, Spanish Teacher
James Bonham, Agri Science Teacher	

Note. Pseudonyms used for respondents

Table 3

Alabama and Holtville High School Demographic Comparison Profile for 2015 Academic Year

Demographics	Holtville High School	Alabama
White	58%	56%
African American	39%	33%
Hispanic	0%	<1%
Asian	0%	<1%
Pacific Islander	0%	<1%
Free or Reduced Lunch	52.47%	76%
Postsecondary matriculation	61.67%	64.34%
Non-matriculation	38.33%	35.97%

Source: Alabama Department of Education Plan 2020 Dashboard, Alabama Department of Education Quick Facts, and Alabama Commission on Higher Education Agency Reports

William Powel, the superintendent, indicated that in order to have student participation in dual enrollment, each school district is charged with formulating strategies to identify strategic priorities and objectives with the advancement of dual enrollment implementation. The institutional practices occurred in the context of overall dual enrollment participation strategy. It is hoped that these practices can be duplicated at other high schools as they formulate strategies to improve dual enrollment participation statewide. Although there is considerable interaction among these institutional practices, the findings are presented according to the three primary research questions.

Research Question 1

What were the strategies the high school used to attract students to participate in dual enrollment programs? Each research participant was asked a series of questions that focused on strategies for dual enrollment participation. The high school has adopted numerous strategies and institutional practices to attract students to participate in dual enrollment programs. The

emergent themes revealed from an analysis of the In vivo codes were orientations services, academics, relationships, and technology.

Theme 1: Orientations Services

The guidance counselor's role was pivotal to strategies for participation in dual enrollment at Holtville High School. My interview with faculty and staff alerted me to the fact that the guidance counselor enjoys a supportive relationship with colleagues which facilitate the adoption of ideas and suggestions presented. Examples presented included Beth Miller, a math teacher who revealed that the guidance counselor is permitted time and space to speak with students during class time about dual enrollment or upcoming campus recruitment visits. Other examples of supportive interactions were conveyed to me by other faculty members. Two of the English teachers, Claire Scales and Lori Ann Spicer, were new teachers and they both shared a substantial reliance on Marsha Bass, the guidance counselor. As young teachers, they participated in dual enrollment while in high school. Both teachers illustrated the importance of the guidance counselor for dual enrollment participation. All of the respondents alluded to the fact that the guidance counselor goes beyond her duties to ensure students are well informed. Amanda Thomas, a science teacher stated, "the guidance counselor does a great job promoting dual enrollment... she keeps the students informed [about] dual enrollment programs...I pass out all information she wants me to share with students." Myra Dixon, another math teacher stated "the guidance counselor lays a path for students to follow. I reinforce it to students as a teacher advisor."

I learned Dan Smith, the principal provides complete autonomy for the guidance counselor to champion dual enrollment programs with the ultimate goal of full matriculation to postsecondary institutions after graduation. Based on my interview, the principal indicated that

he has full confidence in her abilities and shared that she is responsive to student needs. The principle also shared the “importance of brainstorming activities” to maintain fluidity in institutional practices due to the changing student population. To help facilitate a culture that supports the goal of full matriculation, Holtville High School structured its counseling activities using multiple approaches such as Freshman Academy, teacher advisory program, student/parent orientation night, and college night.

When asked to describe the orientation process at Holtville High School, the guidance counselor informed me for ninth grade students, the school year starts with a two-day Freshman Academy. This event is typically held in July. Students meet teachers and staff and are taken on a tour of the school to better acquaint them with the school’s resources. Students are notified of the Freshman Academy by a letter addressed to their parents. An excerpt from the letter states in part “students will have the opportunity to meet teachers, coaches, and other school personnel who will help them have a successful transition from middle school.” One stop on the tour is the guidance counselor’s office where she talks with students about preparing for college and informs them that she will help them develop a plan for matriculation. Parents and students are also informed in the letter “they will learn about graduation requirements.”

The counselor specified during our interview, “I tell them that if they want to go to college, I will help them but it starts with a plan.” The goal of the Freshman Academy is to help ninth graders feel more prepared to transition to high school. She explained, “we communicate the [Holtville Way] and help them understand our academic expectations.” Students are issued laptop computers, email addresses, and invited to join Holtville High School’s Guidance Office Facebook community where scholarship notifications and other valuable scholastic information are shared. At the end of the two-day activities, students are notified who their homeroom

teacher and academic advisor will be. For students who were not able to attend the Freshman Academy, student/parent orientation night provides the same information in a condensed format.

College night is another orientation for students and their parents held later in the school year that was described to me by all the respondents. I learned at this event, students and parents are informed about postsecondary educational opportunities and the requirements for entrance. The guidance counselor facilitates this event at the high school. According to the guidance counselor, the events involve activities and discussions. At these events, parents and students are taught how to navigate the financial aid process.

Parents and students are provided printouts, *8 Steps to Filling Out the FAFSA* and a flow chart of the FAFSA process. The *8 Steps to Filling Out FAFSA* provided instructions for how to create a federal student aid identity (FSA ID) required to electronically sign the free application for federal student aid (FAFSA) application. Included in the guide are instructions to parents and students, informing each to create separate FSA IDs. This document explained what information is needed to complete the FAFSA application and the meaning of each data field. Also provided to participate at the college night is a flow chart to aid in identifying who to list as the parent on the FAFSA application. My review of the flow chart revealed, the logic was presented using frequent condition statements to help applicants complete the application. The condition statements were: both my parents are deceased, I am homeless, I have been in foster care or a ward of the court at some point since I turned 13, I am in a legal guardianship, I am an emancipated minor, I have children or dependents, I am married. The guidance counselor informed me, for parents or students who need more assistance, a financial aid professional from the local community college is present to answer questions. The principal shared, computers are setup to allow parents and students to complete the FAFSA applications.

The counselor indicated, the focus at the high school's college night is not centered on one college, planning for college attendance is the primary focus and information for all public colleges and universities in the state is shared. Also shared is any available scholarship information. Information on dual enrollment and summer bridge programs are shared. Participants are instructed to visit the high school guidance restricted Facebook page and the public information page on the school's web site for more information.

I reviewed other materials presented at the college night. Students are given the *Potential Magazine: College Organizer*. This magazine provides a comprehensive overview of postsecondary matriculation and help students organize the college admission process. An article in the magazine, "5 Reasons to Choose Community College," highlighted the benefits of attending a community college and career options. Nine of the 26 community colleges were featured: Trenholm State, Coastal Alabama, Enterprise State, Jefferson State, Beville State, Northeast Alabama, Southern Union, Northwest-Shoals, and Lurleen B, Wallace. Four-year universities placed advertisements in the magazine highlighting programs of study available at their institutions: Tuskegee University, Troy University, Alabama State University, Auburn University Montgomery, University of South Alabama, Jacksonville State University, and Auburn University.

What I found to be most informative in the *Potential Magazine: College Organizer* was the number of worksheets included in the magazine designed to help students streamline the decision-making and application process. One worksheet was a career planning resume builder where students list all extracurricular activities, leadership positions, community service, awards, jobs, internships, travel experience, career exploration, and camps activities with a delineation for academic years. This document is also used for scholarship applications and college

applications. Another worksheet was an admissions and tour campus scorecard used to help students and parents rate each college or university they visit to help the student find an institution that is the best fit for them. Primarily recorded on this form are the distance from home, tuition, housing cost, size of the college, and average class size. Students also rate the amenities and available activities.

Another worksheet was a college application timeline which was a perpetual calendar. The calendar provided instructions for what should be completed each month. My analysis of this document revealed if students complete all of the worksheets shared in the magazine, they will have completed most of the check listed items included on the timeline.

An additional worksheet included was a college application organizer. This document included the name of the college or university, their web address, any contact names, email addresses, and phone numbers. Spaces to record dates for when applications, scholarships, transcripts and test scores were mailed was also included. A worksheet to compare the expected cost of attendance for three institutions is included breaking down the cost of tuition, general fees, housing, meal plans, and total expected charges per semester.

The final two worksheets were a scholarship worksheet for students to record the names of potential scholarships and scholarship application organizer for students to keep track of all scholarships they applied to. Throughout the magazine was informative articles covering FASFA, the ACT, the SAT, and general college planning. From the guidance counselor, I learned this magazine was central to college night activities. I also learned that dual enrollment and the benefit of participation is also shared with students and their parents.

Vincent Goode, the assistant principal and the guidance counselor informed me, college nights are held at the local high school and on college and university campuses. The local

community college sponsors college night for all surrounding high schools on the college campus. The guidance counselor and Mary Kate Sloan, a math teacher shared college night at the local community college takes a different approach. The primary emphasis is to provide information about programs of study at the community college only. Dual enrollment information is shared in addition to the college's available institutional financial aid. In my interview with Mary Kate Sloan, she described drawings for scholarships that are awarded to participants in attendance at the event. One activity she described was the fact that business and industry human resource personnel from the geographical region were invited to attend and make presentations to parents and students. She recalled the college night presentation she attended with her son, when an automotive supplier human resource representative told the audience that "he would hire students straight from high school and pay them \$15 per hour, but if they complete the associate's degree, the typical starting salary is \$25 per hour." For many in attendance, she felt, that one statement was more impactful than anything else said at the event, which helped to convey the relevance of obtaining postsecondary credentials.

Recruitment services. All of the respondents described connecting students to colleges and universities as one of their essential goals, second to high school graduation. I learned from my interviews that all faculty serve as teacher advisors and shared that providing information about colleges, universities, and the enrollment process is often followed by recruitment activities. They reported to me, the guidance counselor leads all recruitment activities at the high school. I learned the guidance counselor serves as a liaison for colleges and university recruitment officers from a review of the high school's guidance counselor web page. When asked to illustrate her liaison role, the counselor responded she creates awareness by coordinating various recruitment activities to include enrollment notifications placed on Holtville

High School's Guidance Office Facebook page and the school's web page. She also described creating college awareness by maintaining a current bulletin board outside the guidance office suite, sending email notifications to students, parents, and the morning announcements.

The guidance counselor indicated she spearheads campus visits to local postsecondary institutions and facilitate recruitment visits from colleges and universities to Holtville High school. I reviewed the high school's web page and discovered that the guidance counselor encourages students to take campus visits to nonlocal colleges and universities. The requirements listed for offsite campus visits during the school week included first booking a tour of the college or university by calling the admissions office. Students are required to notify the guidance counselor of the intended offsite campus visit within two days of the scheduled visit. Students are then required to have a college or university representative complete an official high school form documenting the student's visit for the student to receive an excused absence.

During my site visit, a recruitment visit from a Jacksonville State University admission counselor and a community college campus tour were scheduled. During the morning announcements, I heard students being reminded of upcoming recruitment events. A field trip to the local community college would be a day-long event filled with activities that included a student play production, lunch in the cafeteria with traditional college students, and a tour of the college campus. I observed students exhibiting visible excitement when boarding the busses to go to the community college and upon their return.

At the Jacksonville State University recruitment assembly, I observed standing room only. According to the guidance counselor, the breakdown of students in attendance was approximately 10% freshmen, 40% sophomore, and 50% juniors. I also observed, that language was used to establish buy-in for dual enrollment participation which stood out to me.

Jacksonville State University admissions counselor used benefit statements to capture student's attention. For example, she explained that "History 201 receives both Jacksonville State University credit and meets [the] tenth grade history requirement." A full list of dual credit courses was discussed. Convenience statements about flexibility of course time and course design were covered, which further explained to students that they can work at their own pace in online classes. Scholarship information was provided to students and the deadline for enrollment was communicated. The Jacksonville State University admissions counselor also explained the support services the university provides and painted an attractive picture of student life on campus for students who wish to continue their studies after graduation.

At the conclusion of the assembly, the guidance counselor's use of language was also powerful. She warned students to take this opportunity very seriously because this was the beginning of their college academic careers. She stated, "do not sign-up for dual enrollment if you are not going to be serious and apply yourself. If you fail the course, it will hurt your college transcript and impact your ability to apply for financial aid when you become traditional students." She further reinforced the expectation of academic excellence expected of Holtville students.

For the recruitment activities for colleges and universities that do not physically visit the high school, the college and university recruiters send invitations and notifications of events being held on their campuses to the guidance counselor. I read invitations from Auburn University, Alabama State University, Emory University, and the University of Alabama Birmingham posted on the high school's web page. Invitations for summer programs that award college credits were also posted on the web page. Invitations from The University of Alabama Rural Health Program, Harvard University summer school, and Clemson University summer

enrichment programs were posted on the web page. I learned from the guidance counselor that she makes every effort to communicate to students the available scholastic opportunities.

Theme 2: Academics

Throughout the research site visit, frequent comments from faculty and staff were made with a focus on “high academic standards.” The superintendent, principal, assistant principal, and math teachers all conveyed pride in the high school’s “high academic standards.” This belief was a prominent theme that tied all the subsequent themes together. The value of academic advising to the achievement of the school’s academic values was deemed critical by the teachers who also serve as advisors. I recognized in the high school’s academic policy handbook, a statement of the high school’s commitment to high academic achievement of the students. Faculty and staff agreed that advising and support activities help students reach their academic goals. I learned that this belief is also documented in the academic policy that support activities are the high school’s top priority.

Academic advising. The respondents all acknowledge the importance of academic advising which is vital to student participation in dual enrollment programs. I learned from all faculty respondents, Holtville High School assists students with the development of their educational goals. They shared that academic advising does not take a linear approach. Faculty and staff, as well as the guidance counselor, help students make informed educational decisions which are in line with their educational goals and consistent with their personal interests.

It was communicated that advising activities begin with helping students develop career goals based upon aptitude assessment results. The principal specified, “we [are] able to meet with [students], have conversations with them, helped them to remain focus on academic. We do all type of different activities and assessments to see what are their interest, what career paths

they want to choose.” Students are encouraged to maximize the educational benefits available to them such as dual enrollment program offerings. I learned from the guidance counselor additional academic advising activities consist of helping students with postsecondary course selection and the course delivery formats that are best for their learning style.

Academic support. Academic support services begin the first day students arrive at Holtville High School. Documented in the notification letter of the Freshman Academy is the school’s overarching goal to help students be successful. Shared with students are Teen Guide brochures: How to Get the Most Out of School, Effective Study Skills, 10 keys to Success, and Motivational Tips for Success. The topics covered in the brochures are steps the student can take to ensure a successful academic career by taking an interest in school, getting involved with school activities, focusing academically, and how to develop study habits that have the greatest effect on learning and grades.

Throughout my interviews, I learned from all faculty and staff of their commitment to helping students excel throughout their four years at the high school. For example, my interview with Janice Kessler, a science teacher informed me that students are permitted to participate in dual enrollment programs, academic support commences with course selections. The guidance counselor shared that she ensures students first enroll in classes which meet the graduation credit requirements. “We sit down and we talk and we make out their schedule, see other courses they need for the coming year and then I show them what they've got to have to graduate and then we talk about options for the other classes... we always have conversations about dual enrollment,” described the guidance counselor.

The principal shared with me during our campus tour, that the high school also provides access to the internet for students without home internet access. Students are allowed to check

out Wi-Fi hotspots, free of charge, from the media center to complete assignments. Likewise, the high school also allows students who are enrolled in online dual enrollment courses to have the freedom to use the school's facilities instead of going home early. I observed many students gathering in the library to complete online dual course activities. I learned, students engage the help of the librarian when needed to complete course assignments.

All in all, students are encouraged to do their best, and academic successes are celebrated. Annually, the high school hosts an awards banquet. The awards banquet is held with the same pomp and circumstance as the athletic banquets. "Everyone can't be an athlete but everyone can be a scholar. This is one way we can celebrate all of our students," said the principal. The awards banquet is a highly anticipated event and is considered one of the highlights of the year. The guidance counselor provided a copy of the policy for attending the awards banquet. I learned from my analysis of this document, that students must maintain a 90-grade point average in all courses each trimester. Students with a 94-grade point average or higher in all courses will receive an academic letter.

Theme 3: Relationships

Through observations and analysis of interviews, I learned there is an emphasis placed on positive relationships among peer groups and between students and faculty. Many of the respondents shared that these positive relationships are viewed as another strategy used for dual enrollment participation. The superintendent, Donna Edwards, a learning specialist, Dianne Lewis, a math teacher, Karl Griffin, a history teacher, and Angela Scott, an English teacher described the power of positive relationships to student engagement in the learning process. Donna Edwards shared "having relationships with students is the cornerstone of our success... as [teacher advisors] we develop close mentoring relationships with our students...helping them

succeed academically is our main goal.” Each respondent communicated that students having positive future outlooks are fostered by the positive relationship which help students to accept advice from faculty. I learned from them that positive relationships also establish safe and nurturing environments where learning can occur. The superintendent said, “we build relationships with our students because we want them to succeed.”

Peers. In my interviews with faculty, I learned that peer relationships have a powerful influence on student participation in dual enrollment programs. Peer relationships are cultivated in many forms at the high school. In one brochure shared with students, “Motivational Tips for Success,” students are encouraged to develop peer relationships. The brochure communicated the importance of such relationships in improving grades and the development of good study habits.

I observed one method for peer relationships, student feedback on dual courses. During a college recruitment assembly, the guidance counselor asked students who have completed an online course to stand and share their experiences concerning the courses. The students’ feedback included the importance of study habits and time management. The guidance counselor conveyed she felt it was important for students to receive this feedback from their peers. She indicated to me that peer feedback helped establish buy-in for dual participation from students and set the tone for student engagement.

I learned another way the high school uses peer relationships to help students participate in dual enrollment is the practice of inviting former students to come back and share their stories. The principal shared the important for first generation students to see the benefits of participating in dual enrollment programs. He shared the benefits of testimonies from former students help current students to visualize their future differently. Students witness the post high school academic success of peers who shared their same life circumstances. The guidance counselor

shared, this practice often acts as a great motivator for dual enrollment participation. The faculty, staff, and administrators agree that it is important for students to have a vision of success in order to increase dual enrollment participation.

From the student's viewpoint, the faculty, staff, and administrators believe participation in dual enrollment has become more of a status symbol within the peer groups. They conclude that students are proud of their academic accomplishments and take pride in taking college courses. James Bonham, the agri-science teacher describes the fact that pride in dual enrollment has also become a major part of their identity. "Students see other kids being successful at something and they want to be a part of it also." I observed students in study groups around campus, in the library, in the cafeteria, in the hallways. They could be overheard discussing academic topics. My observation of the overall climate at the high school was it seemed more like a community college campus instead of a high school. Students were serious and focused. The noise at the high school as students change classes or ate in the cafeteria was not loud or chaotic in nature. If not for the bells signaling the end or beginning of class periods, the days were orderly and eventless.

Faculty. I learned faculty relationships also influence the academic drive of students and dual enrollment participation. Teacher advisors communicated that student failures are viewed as opportunities to encourage academic growth. Kimberly Clark, a science teacher shared, student successes are always met with praise. All in all, it was communicated to me that high academic expectations are expected of every student, "you get what you expect; students will rise only to the level you set" recalled Reva Biggs, an English teacher. The evidence suggests that faculty and staff have implemented an inclusive environment filled with academic support that inspires students to further their education. Among the examples Reva Biggs reported, she

has students who contact her to proofread papers throughout their college careers. The learning relationship she established has extended beyond the four years at Holtville High School.

Myra Dixon, a math teacher described the use of motivational speeches she shares with students. Students are encouraged to be active participants in achieving their dreams and she simply inspires them to “dream big.” She shares stories with students to invoke visual depictions of not participating in dual enrollment. She communicated to me how she equated dual enrollment participation with road signs. The road signs are important for driving. She stated, “When you are going somewhere you need road signs to not get lost. Without road signs, you drive around in circles till you figure it out.” She has empathy for her students and shares her life story of humble beginnings to success. She tells students that “getting a college degree gives you options in life.” For her, the biggest reward is running into past students who share the impact which those motivational speeches had in their lives. Faculty members agree; relationships are important and students can tell if they are genuine or not. The value of relationships to the achievement of the school’s academic values was deemed highly significant by all of the respondents.

Theme 4: Technology

The discussions on technology were very insightful and emphasized the role technology has in the development of learning communities as a strategy for dual enrollment participation. The superintendent specified that in 2004, the school district developed a strategic plan to have every student in the district issued a laptop computer and/or tablet. During my interview with the superintendent, I learned the district viewed the integration of computers were as important as the text books. This program, affectionally known as “one to one,” has created “authentic learning environments for students.” To date, the district has successfully integrated technology

at every grade level. As a result, when students enter the ninth grade, they are already adapted to the use of technology in the learning process.

Learning Management System. I learned technology and the use of Learning Management System (LMS) has made a significant influence on student participation in dual enrollment at Holtville High School. The assistant principal communicated, the use of LMS has created “self-directed learning environments” which support dual enrollment participation and have affected every aspect of student life. I learned from him that as a result of the current digital era, teaching and learning have moved from the traditional classroom experience by creating digital learning communities, connecting students to each other, to the teacher, and to wider source of resource materials.

The assistant principal shared how the implementation of the “one to one” program has provided Holtville High School the opportunity to expanded its digital foot print with integrated technology of LMS. The LMS allows teachers to practice a hybrid approach to course content delivery. I learned from Ashley Bennett, a history teacher, in addition to face to face contact hours, students are allowed self-directed learning activities with the online course delivery features. She shared examples of her use of the LMS system. She described the use of web enhanced activities which allows her to post course information and class assignments that permit students to complete assignments outside of the classroom. She described that this practice facilitates more class room instruction. She also shared that the LMS provides a communication forum where students can communicate with her as needed and received the assistance they need without taking up precious classroom instruction time.

The guidance counselor shared, due to students’ familiarity with online course delivery, the high school expanded its dual enrollment offerings to include four-year universities outside

of their service area which offer online and summer dual courses. Raymond Lee, an economics teacher conveyed, “I Think [LMS] is great because [students] have been exposed to Blackboard. I think that makes the transition from high school to college, a little less scary.”

Flexible modeling. Flexible scheduling is also a strategy the high school used to attract student participation in dual enrollment programs. All of the respondents described an environment where high school students are ready for independence and entrance to adulthood. Edgar Booth, an Spanish teacher reported “when students participate in dual enrollment programs, the students begin to experience a sense of freedom and feel like they are college students not high school students.” They shared this desired independence is used as a major motivator for dual enrollment participation.

The principal described the high school’ use of the trimester approach to award course credits for graduation. I learned, this strategy allows students to achieve the courses required for graduation at a faster pace. By their senior year of high school, many students have already earned enough credits for graduation. As a result, students enrolled in dual enrollment courses, are permitted to leave school early to attend classes at the local community college. All the respondents agreed that from the student’s perspective this practice is the primary motivator for dual enrollment participation. Edgar Booth shared “leaving campus early is the biggest motivator for dual enrollment participation.”

The use of technology also permits students to take full advantage of flexible scheduling with online dual enrollment. I was informed by many faculty members, that students are permitted to stay on campus and take their classes in the library. This arrangement provides students with an in-house support system from faculty and staff with online classes. Students were observed in learning communities actively engaged in self-directed discussions on class

topics. The assistant principal reported, “technology permits flexible teaching by requiring student to pursue information from other sources... which permits flexible school days.”

The results show that multiple institutional practices are in use to help facilitate student participation in dual enrollment programs. I observed that the advancement in technology is woven throughout the institutional practices. Kimberly Clark, a science teacher recounted “we do a lot professional development to help us incorporate technology in classroom instruction... [we] issues class assignments [in the Learning Management System] that will eventually help students with online dual enrollment classes.” As a result of my analysis of the interviews, I learned that traditional approaches may no longer be what students need to successfully meet their educational goals. As a result, institutional support services are important in helping students reach their educational and career goals. James Bonham, the agri science teacher shared, that many of the parents do not have postsecondary credentials and it is incumbent on them to provide the guidance the parents are unable to provide.

Research Question 2

How did the high school assist students in successfully completing dual enrollment programs? Within the framework of institutional practice, the respondents intimated the importance of understanding the socioeconomic background of the student population. The principal shared, to better serve the students, professional development workshops on poverty are required to help faculty members understand the various obstacles which students must overcome to be successful in completing dual enrollment courses. The principal reported, in an effort to remove some of the negative psychological effect which some students face due to the social stigma of “free lunch,” Holtville High School offered free lunch to all students beginning with the 2016-17 academic year. Madison Starks, a learning specialist stated, “institutional

practices center around the needs of the child. Some practices can be generalized [like free lunch] but often they are mostly centered around the needs of [the] individual.” All the respondents using various terms stated that their primary focus was not only to prepare their students for college but to prepare them for life. The high school’s support efforts begin immediately upon enrollment and continue through graduation in a variety of forms. The emergent themes revealed from an analysis of the In vivo codes for institutional support were leadership, counseling activities, communication, and collaboration.

Theme 1: Leadership

Leadership was considered important for student participation in dual enrollment at Holtville High School. Emerging as a unifying theme for all institutional practices was the importance of leadership. I learned from all the respondents, command and control is not how the leadership team motivates and guides faculty, staff, and students at Holtville High School. A collaborative team approach was reported as an effective motivator which the leadership team utilizes. It was communicated that each faculty member has a significant role in student success and takes part in helping students create a vision for their future which ties in with the district’s vision. The all of research participants described strong personal relationships. Working with students requires establishing trustful relationships is a central belief of the respondents. Marisol Vargas, a Spanish teacher stated, “students can tell if you don’t care about them.” Further clarifying “that meant not only teaching students but taking the time to get to know them and their problems.”

Principal. The respondents described a culture where the tone at the top established a philosophy of “academic excellence” and high expectations for students, faculty, and staff. “Academics is number one, we are very serious about test scores here, we prepare our kids for

college,” Karl Griffin, a social studies teacher shared. “We ask the students how they are doing in their dual enrollment classes, not are you going to enroll in dual enrollment classes. That way they know we expect them to participate,” reported the principal. Twenty-five percent of the participants described the differences in leadership at Holtville High School compared with the previous high schools where they were employed. The teachers consider leadership as the single most contributing factor for student participation in dual enrollment courses. The assistant principal commented that the concept of dual enrollment was mentioned at his previous high school; however, it was not championed like it is at Holtville High School. As a result, those high schools had very little interest or participation in dual enrollment programs. Additionally, as the result of non-advocacy for dual enrollment, there was very little buy-in from faculty members. The teachers narrated a culture of top down, command obedience administration where faculty and staff were not empowered. One participant, Ashley Bennett, a history teacher commented, “the biggest difference at Holtville High School is that we are empowered to cultivate relationships which build upon the learning experience. The empowerment is extended beyond the classroom here. We can solicit support from our community to help our students.”

One such example of empowerment stood out. In an effort to make history relevant to students and bring its concepts alive, Ashley Bennett developed a non-credit summer learning course for students interested in archaeology. She reached out to an archeologist at a private four-year university to establish a partnership to take students on scientific digs in the surrounding townships. The students search primarily for Native American relics. Ashley Bennett remarked, “the archaeologist told our students how gifted they were and that they were doing the same level course work as his college juniors and seniors.” As a direct result of this

collaboration, the school district and the university (Tuskegee University) established an articulation agreement for dual enrollment starting with the spring 2018 semester.

The faculty and staff also credit the leadership style of the principal with the positive outcomes for student achievement. Lori Ann Spicer, an English teacher said, the principal “has, not only the respect from us, but the kids look up to him and that makes the biggest difference. Many of our students don’t want to disappoint him.” Throughout the week’s site visit, the principal was observed interacting with students. He combined the two roles of disciplinarian and cheerleader. I observed that he never walked past a student or faculty member without personally interacting with them. The principal also enjoys a supportive relationship with the school district. He indicated that he feels free to incorporate innovative practices with the full support from the superintendent and the local board of education. The principal’s high visibility, coupled with support from the superintendent, cultivates an atmosphere in which faculty and staff are free to develop creative approaches to stimulate interest and participation in dual enrollment.

Superintendent. The faculty, staff, and administration enjoy a strong supportive relationship with the district leadership. The principal and guidance counselor indicated without the superintendent’s clear vision for the future successes of the students in the entire district the positive outcomes would not be possible. The interview with the superintendent revealed his commitment to a seamless transition through each level of education. I learned from the superintendent, in addition to monitoring graduation rates at the high school, the district puts a high priority on postsecondary matriculation as well. As a result, the superintendent supports the innovative practices at the high school which facilitate seamless transitions to postsecondary institutions. The principal indicated that the superintendent is responsive to all ideas and he is

highly visible in the district. The guidance counselor said, “Our superintendent takes the time to celebrate the success of all students in a newsletter that is distributed to the entire district.” This level of visibility and support from the superintendent helps to solidify the high school’s efforts to increase participation in dual enrollment programs as a means to increase matriculation to postsecondary institutions.

Theme 2: Counseling Activities

I learned the roles and responsibilities of the guidance counselor is also a focal point of the strategy which Holtville High School uses to support students in dual enrollment programs. The guidance counselor works closely with students and parents in addition to collaborations with faculty and administrators. Ashley Bennett shared, “the guidance counselor is the most important part of our dual enrollment process. She meets with students, everywhere you look she has signs related to college, she makes sure we get the word out about any and everything college related.” While the primary responsibility of the guidance counselor has not changed, the high school has adopted some innovative approaches to providing guidance services to students.

Overall the guidance counselor believes in the power of personal student interactions and has an open-door policy. She shared an awareness of the limitations of face-to-face counseling approaches where she can only serve a fixed number of students in a given day. The guidance counselor was aware of the influence social media has on the high school student population. As a result, the high school expanded its digital platform to include social media to disseminate information to the students. The high school has a Facebook page where social media plays a critical role in introducing students to guidance services.

Career Academy. The faculty and staff provide additional guidance services which help students with their final transition to adulthood. One of the required courses for all ninth graders

is Career Academy. In this course, students are required to explore three careers which they are interested in pursuing. Michael Whitt, the Career Academy teacher shared “our success with dual enrollment is because of our career readiness efforts. We help students identify what they like and what they don’t like. We use the Kuder Test to help students identify a career path. I’m able to generate reports to help students understand what’s required educationally for the careers they choose.” Michael Whitt, who is also the business education teacher informed me that, during the exploration of the careers selected, students are required to identify the educational requirements and the projected starting salaries. “As the business education teacher also, I pull in the Kuder Test results and make class assignments to help them fully develop their interests.” One of the class assignments requires students to develop a budget based upon the projected salaries. This assignment gives students a sense of life after high school. Another class assignment is to explore other educational opportunities and requirements for various occupations to guide students on a more informed career path.

One teacher, Mary Kate Sloan, recounts her son’s experience in the Career Academy. Her perspective on the influence of Career Academy was more in depth. She described her son’s excitement with the career path he chose. She said, “My son knows where he wants to work and where he plans to live after high school.” The local community college does not offer the program of study her son wants to pursue, so she has him enrolled in general studies courses with the intent to transfer the courses to a different college after high school. She has helped her son map out a plan to take general education courses for transfer after graduation. This approach will help her son enter college as a sophomore or junior and will assist him in reaching his career aspirations at a faster pace. She feels this experience with her son has made her a better teacher and advisor for her students. She uses benefit statements to help students see the value in

completing the available college courses. Edgar Booth shared “the Career Academy is the biggest part of our success.”

Teacher advisory program. The Teacher Advisory Program, affectionately referred to as TAP, is a program which assigns students to their homeroom teacher in the ninth grade. I learned from the respondents that students will then have the same homeroom teacher for their entire high school career. According to the superintendent, the principal, and the guidance counselor, the TAP program creates a close bond between the TAP teacher and students by which students develop a strong identity with the high school. I learned the TAP teacher serves as a student advocate who builds trust with the students and their parents. Samantha Jackson, a learning specialist shared “as a TAP teacher I am more of an advocate for my students. I go to teachers on their behalf and I work with them to improve their grades.” The TAP program cultivates a culture of mutual care and respect. Marisol Vargas shared “I feel like students are an extension of my personal family. Our motto is we are the Holtville Family.”

The discussions surrounding the perceived impression of the TAP program to dual enrollment participation revealed that 100% of the respondents felt the role of TAP was crucial to the academic success of their students. An overall theme from the respondents was that they act as an extension of the guidance counselor, an extension of parents, as tutors, and as a friend. Reva Biggs, English teacher responded, “These are our kids and we are like an extension of their parents.” Another teacher, Madison Starks, responded, “we review progress reports with the students and if there is a problem with grades, they are more ashamed to have to discuss it with us than with their parents.”

When asked to expound on the perception that their role is an extension of the guidance counselor, the TAP teachers were keenly aware that the high school has one guidance counselor.

They described a process of helping students transition from freshmen to seniors. The participants indicated that the advice needs changes as students' progress in grade level. An example was given for ninth graders. Michael Whitt reported that their needs are more in line with student adjustments. With each grade advancement the focus of the TAP program become more concentrated on dual enrollment and the overall college admissions process. The TAP teachers described this time as essential for students since many are going to be first generation students whose parents do not have college degrees and lack in-depth knowledge of higher education. I learned from the TAP teachers, that they not only provide practical advice to the students on their educational and career aspirations but also act as a "cheerleader" to encourage and inspire students to have "high expectations for their lives." Myra Dixon stated that she often shares with her students that she grew up poor, in a large family where she slept on the floor. She uses herself to show her students "success is achievable regardless of where you come from." She often illustrates to her students the transformational benefits of receiving a college degree.

Theme 3: Communication

In my review of communication modes, I observed Holtville High School's communication efforts are purposeful in the way information is communicated to students, parents, and the community. I observed the high school's technology infrastructure supports the communication efforts. The use of technology ensures efficiency with the exchange of information. Furthermore, the use of technology removes barriers to effective communication and ensures the effective delivery of messages.

Delivery. I observed Holtville High School is deliberate in its use of technology as it is deeply integrated into the daily communication practices. I learned from the principal,

technology is used to connect the student with teachers, parents with teachers, and the community with the high school. All of the faculty explained that students are expected to use technology to learn independently via the Learning Management System (LMS). I learned that faculty members communicate with students via LMS and emails. The principal shared, for students who do not have internet access at home, the high school provides Wi-Fi “hot spots” free of charge as part of library services.

I observed technology is used to connect parents to faculty via the Information Now (Inow) portal. In review of Inow, I learned parents have access to children’s grades, progress reports, teachers’ lesson plans, and attendance records. Parents are also able to communicate directly with faculty members through Inow. Lastly, I learned from faculty members, they also utilize emails to share information with parents. Parents are encouraged to be active participants in their children’s education. According to the guidance counselor, to connect the community to high school, Holtville has an established a strong social media presence. Social media is used to keep the community knowledgeable of the current news about the high school. It is used to celebrate the successes of the high school and to communicate the needs of the student body.

Messaging. High academic standards were observed via the use of signage strategically placed for high visibility as seen in Table 4. In my observation, messages were ubiquitous, reinforcing the ethos of “academic excellence.” These messages surround the students throughout their high school academic career. Symbolically, the signage acts as street signs, guiding students to their final destination of postsecondary matriculation.

Table 4

Signage Descriptions

Location	Sign Verbiage or Description
Main Entrance	Mission Statement – Holtville ... Together, Educating, with Excellence, Challenging for Success, Inspiring Learning for Life. Attendance - Attention – Attitude - Achievement
Main Hallway	Large bulletin board with every four-year university in Alabama with their entrance and scholarship requirements (minimum ACT score and GPA).
Outside Guidance Counsellor Office	Posters from Alabama’s public universities. The posters are informational and showcase student life at the universities.
Main Office	Mission Statement
Outside the Library	Bulletin board “Exceed Expectations” lists the names of students that pass the ACT
Outside the Library	Bulletin board “Character Word of the Month – Caring”
Base of Stairway	Mission Statement
Entrance to Stairway	Bulletin board with inspirational posters for character development
Entrance to Stairway	Bulletin board “12 powerful words” list vocabulary words and brief definitions
Doors	Defense: Demanding Excellence from Everyone No Selfish Exceptions = WINS

I observed during the research site visit, upon entering the high school for the first time, the messaging set the academic tone. I observed in the main entrance there was an oversized sign of the mission statement that spans almost the entire wall. At the bottom of the sign are the four A’s: attendance, attention, attitude, and achievement. I also observed the mission statement signs are strategically displayed all over campus to reinforce the academic culture to students.

Evidence of the high school’s athletic success on the grid iron was typically displayed in a trophy case in the main hallway. However, next to the trophy case was a very large bulletin board that displayed the entrance and scholarship requirements (minimum ACT score and GPA)

of every four-year university in the state of Alabama. This bulletin board was across from the guidance office. Outside the guidance office door was a smaller bulletin board which displayed posters from universities. The posters showcased student life at the various universities. These bulletin boards subliminally communicated the expectation of postsecondary matriculation.

I observed additional signage that conveyed the high school's academic culture was also on display. Next to the library was a bulletin board that listed the names of all the students who had passed the ACT test. To aid other students as they prepared to take the ACT test were bulletin boards with vocabulary words. Inspirational signs were also on display to strengthen student's beliefs in their ability to meet the expectations set for them. I observed as students walk the hallways at Holtville High School, they are likewise met with signs that communicate to students the importance of character. The character word of the day is also displayed outside the library.

I observed at Holtville High School communication efforts are purposeful and multifaceted. The faculty, staff, and administrators agree the more information parents and students have the more their chances will increase for success. It is my conclusion that communication efforts at the high school are considered a major strength in their institutional support practices. The sharing of information helps parents and students make informed decisions.

Theme 4: Collaboration

I surmise from interviews that collaboration is another strategy used for dual enrollment participation. Collaboration is an organizational philosophy adopted by Holtville High School. In review of documents gathered from the high school and information on the school's web page, I learned the district and school leadership have communicated a clear vision for student success

to all stakeholders. The vision communicated has generated a shared purpose which compels all stakeholders to take an active role in ensuring students take ownership of their density.

Internal. When asked to elaborate on elements of support services that were important to student success, the concept of collaboration was often stated. I learned a collaborative team approach has proven to be an effective motivator which is incorporated by the leadership team. All of the respondents shared it takes a team approach and each faculty member has a significant role in student success and takes part in helping students create a vision for their future. Teachers responded that they work together and share ideas to achieve the common goal of helping their students gain the academic skills needed to participate in dual enrollment programs. For example, Samantha Jackson explained “we do our best to challenge the kids to do their best. We hold the kids to the highest standard. We pick them up sometimes and drag them to the finish line.”

All the respondents reported that internal collaboration generates synergy which unites the high school. The interview revealed everyone is united behind the goals and objectives of the high school. The respondents alluded to the importance of internal collaboration to establish buy-in for institutional practices. The mission and vision is often adopted by all internal stakeholders. Teachers communicated that students have a strong association with the high school. The concept of “family” was mentioned numerous times throughout the week. This association remains after graduation and as a result the effects of internal synergy extend to the community.

External. The superintendent shared, Holtville High School enjoys a robust collaborative relationship with external stakeholders. The principal shared the community has a strong sense of pride in the high school. I observed, much like small towns with major

universities are known as college towns, this community centers around Holtville High School. The superintendent and the principal shared it is customary practice for the high school to unite the community stakeholders to fund school projects and to fund scholarships for dual enrollment.

Recently, the high school renovated the sports complex. I learned from the superintendent, this multi-million-dollar renovation project was financed primarily by donations from the community and alumni of Holtville High School. All the respondents described the use of private funds as important to the students at the high school. The principal reported “we have local foundations and businesses that help our kids with tuition and help support the high school.” According to the principal, crowdfunding efforts are routinely used to raise funds for the high school. An example shared by the principal, was private donations paid travel expenses to send the football team to the playoffs and to championship games. I learned that the lines of communication to the community and alumni are always open. The use of social media helps to keep alumni abreast of current events at the high school.

The high school has maximized its advantage of proximity to community colleges and universities. Private donations are also used to pay tuition for students who do not have the ability to pay. The guidance counselor shared, school leaders and faculty reach out to business and industry to support the financial needs of students. School leaders also reach out to colleges and universities to solicit scholarships for students. I also learned from the guidance counselor that feedback from college and universities on student academic performances is shared with the high school administration. This feedback is used in curriculum development to ensure Holtville High School students have a competitive advantage.

The principal shared the teachers enjoy a dedicated support network with the parents. Parents regularly attend Parent Teacher Association meetings. I learned parents often volunteer

and look for ways to support the high school. Parental partnerships are viewed as a mechanism to strengthen the connection between faculty and students. Parents reinforce the goals of high school graduation and postsecondary matriculation.

The results for this research question revealed the importance of institutional support services in helping students successfully complete dual enrollment programs. The emphasis on positive relationships emerged from the interviews as a direct link to dual enrollment participation and completion. The influence of relationships is far reaching. The evidence revealed that positive relationships alone cannot overcome the challenges inherent to dual enrollment for some student populations.

Research Question 3

What challenges does the high school face in the implementation of dual enrollment programs? I learned from the interviews that Holtville High School has numerous support activities in place and has established a school culture where students and faculty work together to reach educational goals. The superintendent, principal, and the guidance counselor shared the high school enjoys support from the community and works collaboratively to help students overcome barriers to dual enrollment participation. All of the respondents shared the institutional support activities are wide ranging; however, despite the many success stories, challenges still exist for student participation in dual enrollment programs. The emergent themes that describe the challenges were transportation, tuition, maturity, and incompatible systems.

Theme 1: Transportation

All of the respondents stated transportation is the biggest challenge that prohibits students from participating in dual enrolment programs at Holtville High School. The guidance counselor shared, dual enrollment participation is categorized as academic or career technical education. I

learned from the guidance counselor that approximately 95% of dual enrollment participants are enrolled in academic courses. Students are required to provide their own transportation to dual courses. Raymond Lee reported “kids that really can do well in dual enrollment courses can’t participate because they don’t have transportation.” Another teacher Kent Moss, shared “we would have more kids to participate if it were not for transportation issues.”

I observed that the city does not have public transportation. Raymond Lee informed me that students who do not have personal transportation often carpool when possible. I learned from the guidance counselor, for students without their own transportation, it is difficult to take evening classes or attend tutoring sessions at the college. Moreover, it is difficult to attend any college event. The respondents agreed, when the issue of transportation is solved, the high school should see dramatic increases in dual participation. The superintendent and the principal speculate a possible increase from 36% to 85- 90% of the student population graduating with postsecondary credits or industry credentials.

Distance. I learned from the guidance counselor that academically focused students mostly attend traditional courses at the local community college main campus, which is approximately 15 miles from the high school. I reviewed the community college’s webpage and found the career technical education courses are taught at the community college’s satellite campus. MapQuest revealed the community college’s satellite campus is approximately 45 miles from Holtville High School. Frequent comments were made by faculty, staff, and the administration that transportation was the major obstacle which prohibited students interested in career technical education programs of study from dual enrollment participation. Raymond Lee brought to my attention that he has projected that “20% – 30% of seniors are unable to participate because they are interested in career technical education courses and do not have

transportation to attend the classes.” I learned a significant population of students at the high school were interested in career technical education fields of study. The superintendent, principal, and guidance counselor shared that currently students interested in career technical education programs are bussed to the county career technical high school.

District support. The superintendent and the principal shared plans to eliminate the obstacle of transportation. I learned the school district has approved measures to bridge the gap in career technical education dual enrollment participation. The superintendent shared that the local board of education have approved a plan to start bussing students to the community college’s satellite campus for career technical education training beginning with the 2017-18 academic year. The superintendent and the principal are acutely aware of the occupational advantages of higher education credentials to the lifetime earnings of students. This pilot program will begin with 50 students and one bus.

Another strategy, communicated by the guidance counselor, employed by the high school to eliminate the issue of transportation was the introduction of online dual enrollment courses for academic programs. The high school has signed articulation agreements with several universities to expand online offering. Additionally, the high school encouraged students to participate in summer bridge programs.

Theme 2: Tuition

All of the respondents communicated to me that tuition was another challenge that prohibited students from participating in dual enrolment programs. As mentioned earlier, the guidance counselor shared that approximately 95% of students participating in dual enrollment programs were enrolled in academic programs. I learned from her that students and their parents are responsible for the payment of books, fees, and tuition. All of the research respondents

attributed this fact as a leading cause for some students choosing not to participate in dual enrollment programs. The superintendent and the principal shared this is a challenge the school district is seeking to overcome by working with the community and postsecondary institutions to help families offset the cost of tuition.

Non-Pell grant eligibility. A majority of the student body at Holtville High School qualifies for Pell Grant. However, Pell Grants are awarded to post high school graduates. Precisely, Pell Grants are only awarded to undergraduate students who have earned a high school diploma or GED and have not earned a bachelor's degree. I learned for students interested in career technical education programs, scholarships are available and are issued from the state workforce initiatives. Primarily, the state funds career technical education scholarships for students enrolled at community colleges. Typically, career technical education scholarships cover tuition, fees, books, and equipment. While the superintendent, principal, and guidance counselor were very well versed on career technical education scholarships, not all of faculty members were. The high school and the district are working to overcome the obstacle that non-eligibility for Pell Grant presents.

Affordability. Holtville High School works to help with the affordability of tuition and fees for its students. I learned, despite all the efforts to make dual enrollment affordable for the students, it is still a challenge the high school is working to overcome. A math teacher shared, “as [a teacher advisor] I get to know the students and the parents. Parents have said to me they can’t afford to pay for classes. I refer them to [the guidance counselor] to see if she can help with any financial aid or financial advice.” The guidance counselor shared “our area is really poverty-stricken and a lot of students live at the poverty level. A lot of multi-families live in the home... so most of the families ...do not have \$410 to pay for their child to go take a class and you can't

use financial aid to cover [tuition for] dual classes.” Currently posted on the school’s web page are numerous scholarship opportunities. The guidance counselor seeks grant opportunities that will pay for academic dual enrollment courses and shares this information via social media, school announcements, and emails. Additionally, the administration seeks financial support from the community to pay tuition and fees for students.

Theme 3: Maturity

Student maturity is another challenge for dual enrollment participation at Holtville High School. I learned faculty members make concerted efforts to prepare students emotionally for educational advancement and to shape their moral character development as well. Some faculty members reported, while students are often academically prepared, some are not mature enough to enroll in dual courses. The faculty attributed this to a lack of confidence and a lack of discipline.

Confidence. I learned the high school help students overcome the lack of confidence with contextualized learning activities to make the content material more relevant for students. The teachers described contextualized activities that help students become more engaged in the learning process. Michael Whitt recounts the importance of having students apply the theories presented in the classroom to real world situation projects. An example given was fiscal management where simulation projects are used for students to apply the knowledge learned. Ashley Bennett explained for students that are uncertain about their career plans, contextualized activities help them to expand their aspirations to better identify career prospects, stating “in the early years, they are not thinking about the real world yet, and by their junior year they are focused and ready for dual enrollment participation.” Frequent college visits are scheduled beginning in the ninth grade to build awareness and to remove any fear related to college

matriculation. Myra Dixon shared “some of the kids are scared to take college level courses. It’s exciting to see them grow and mature... once they have successfully completed their first college class they become different students, filled with confidence.”

Also included in confidence building is the moral character development of students. I observed that the high school surrounds all students with moral character development messaging to reinforce the emphasis of its importance, as seen in Table 4. I learned from reading admission requirements for colleges and universities listed on the high school’s web page, that the moral character of students is paramount in the admittance process. The respondents also communicated that good moral character development is important to being good citizens. A Myra Dixon reported, “this is our community and these are our kids,” Donna Edwards reported, “if we fail them we fail ourselves.”

Lastly, the high school helps build confidence in its student population with leadership opportunities. I learned from the guidance counselor, students are encouraged to participate in thirteen school-based clubs to help build leadership skills. Students are also invited to participate in state wide organizations to help foster their leadership development. I reviewed invitations to students from Alabama Junior Miss, Alabama Students Against Tobacco Ambassador, AXA Foundation, Cooperative and Work-Integrated Education, and Junior Statesman Summer School. These are some of the organizations that the high school has partnered with to help students with leadership development. Donna Edwards, indicated these experiences with leadership building provide a strong connection between empowerment and maturity. “It helps the students prepare for college and I make this [a] part of everyday conversations.” Although this process starts in the ninth grade, some students do not reach the necessary confidence needed to enroll in dual enrollment classes until their senior year of high school.

Discipline. The lack of discipline for academic work is another side effect of maturity issues. “We remind students of the importance of test taking and to try their hardest on all tests” said Madison Starks. I learned students are not permitted to enroll in dual courses without permission from the high school. The guidance counselor, the faculty, staff, and administrators are very protective of the students. Students that lack discipline for academic work are not permitted to participate in dual enrollment programs. Madison Starks also shared the high school host ACT camps, “to help students improve test taking skills... and when students received their scores back it increases their confidence.” While the faculty, staff, and administrators would like to have 100% participation in dual enrollment offerings, the reality is, students must have the necessary maturity level in order to participate.

Failing dual classes will affect a student’s ability to receive Pell Grants due to the satisfactory academic progress requirements. The guidance counselor shared “you know we’ve got a lot of first-generation college students here and I check the grades and if the grades are lacking we talked about how to do better. We talk about how important it is to keep the GPA up at the beginning of their college transcript and [explain] how [bad grades] can affect Financial Aid and scholarship offers.” I learned the high school has worked to develop strategies to help with maturity development and the discipline for academic work needed to successfully complete dual courses.

Holtville High School adopted strategies to help students develop discipline for academic work. As mentioned earlier in questions one and two, the high school provided the individual support to students by the teacher advisory program to develop discipline for academic work. Another strategy shared was the focus on academic excellence. Students are taught study habits and self-directed learning paths via the use of hybrid online high school courses. Lastly, I

observed that the high school has created an environment conducive for learning communities. Students are permitted to gather in informal learning groups around campus. The faculty responders indicated that students learn from each other and the added benefit of peer pressure to excel acts as a motivator to develop good study habits. According to Edgar Booth, “pride in doing well academically,” is another motivator. I learned, peer led study groups allow students to exchange knowledge and emotional support to help each other. Peer relationships are also advantageous to the development of student maturity.

Theme 4: Incompatible Systems

Incompatible systems emerged as another challenge for dual enrollment participation. Currently, Holtville High School is on a trimester system with three grade reporting periods in an academic year. The colleges and universities where students are dually enrolled are primarily on a semester system with two grade reporting periods in an academic year. However, some colleges and universities offer mini terms which expand the grading system to four periods in an academic year.

Trimester vs semester. I learned the challenge in academic advising is helping students understand the dual courses do not finish at the same time as the trimester ends at the high school. When students are between terms at the high school, they still have classes to attend at the college. Likewise, college exam schedules conflict with high school testing schedules. Teachers reported the importance of helping students with time management skills and not allowing students to enroll in too many courses as essential to overcoming this barrier.

Another challenge tied to incompatible systems is ensuring students are enrolled in the dual credit courses with enough time to receive the sufficient number of credits for high school graduation. I learned for example, if the student enrolls in a full semester spring course, the final

grade will not be awarded until the end of term which is in May. Even though both the college and the high school end their academic year in May, they do not end on the same day.

A third challenge tied to incompatible systems is extracurricular activities. I learned incompatible systems make it harder for students to participate in cheerleading, band, theatre productions, or sports. Although students still participate in dual enrollment, they often do not take full advantage of course offerings. I learned from Kent Moss that some students choose to participate after sport seasons end or during the summer. Another segment of students chooses not to participate at all. Choosing instead to take the traditional route and matriculate fully after high school.

Placement tests. The placement tests used for math and English present challenges for dual enrollment participation. Myra Dixon shared some students test into remedial courses. Remedial courses are not permitted because they do provide high school course credits. I learned another challenge of placement tests is some students test in lower level math instead of higher level math. While the lower level math courses are permitted and dual credit is awarded, Myra Dixon and other teachers disagree with the given placement citing the students have higher aptitudes than the test shows. This disconnect with placement testing has caused minimal discourse with high school faculty. However, students are still encouraged to participate in dual enrollment programs.

Despite the challenges presented for dual enrollment participation, the high school persists in gathering support and student participation. Faculty, staff, and the administration are committed to academic excellence of all students and the seamless transition to postsecondary institutions. The respondents agreed that the institutional practices and support services help students overcome the barriers presented.

Summary

The respondents' answers to the research questions depicted a culture where the advocacy for dual enrollment programs demonstrated strong student participation. Institutional practices helped shape a seamless transition to postsecondary institutions. Woven throughout the emergent themes was the notion of empowerment. I learned the principal and the administrative staff were empowered to implement innovative practices to generate student interest in dual enrollment programs. Faculty members were empowered to go beyond the traditional boundaries of class room teachers in order to help students reach their full potential. Students were empowered to look beyond their current circumstances and take ownership of their own destiny.

The depiction of institutional support services showcased flexibility in helping students to succeed. As the demographics of the high school changed, the support services reflected those changes. The school leadership has the latitude to adapt support services with full district support. Likewise, essential to all institutional support services was the concept of counseling activities. All the respondents described the shared practice of counseling students. Positive relationships provided the foundation that allowed counseling activities to be effective. Likewise, positive relationships with postsecondary institutions help to provide choices for students. The guidance counselor's role was critical in connecting students to postsecondary institutions and the availability of scholarships. Counseling activities were also tied to the deliberate use of technology in order to communicate to students, parents, and the community. A shared sense of purpose was transferred to the students and all the respondents accepted ownership in helping students succeed.

The respondents also described a culture where challenges to dual enrollment implementation were met with innovative solutions. The faculty, staff, and administrators are committed to helping students matriculate to postsecondary institutions. They are committed to providing multiple avenues to dual enrollment participation. The study revealed that despite the high school's effort, 100% dual enrollment participation has not been realized to date. There is still work to be done to help students obtain postsecondary credentials.

CHAPTER V:

DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS

This chapter summarizes and elaborates upon the major themes reported by the participants of this study. The theoretical framework utilized for this study focused on the Partnership Model to understand the dual enrollment phenomena (Amey, Eddy, & Campbell, 2010). The Partnership Model was important to this study because it revealed to what extent various partnerships at the high school was used to facilitate dual enrollment participation at postsecondary institutions. Particularly, the results from this research study expand our understanding of secondary institutional practices that sustain postsecondary partnerships.

This case study involved one public high school in the state of Alabama. The high school was visited in April and May 2017. Research activities included a systematic collection of data from personnel interviews, observations, pamphlets, diagrams of bulletin boards, diagrams of public spaces, and examination of public documents, as seen in Table 2.

Discussion

Research Question 1

What were the strategies the high school used to attract students to participate in dual enrollment programs? This question generated a profile of the institutional practices for dual enrollment implementation. The results showed that multiple institutional practices are used to help facilitate student participation in dual enrollment programs (see Table 5).

Table 5

Institutional Practices Used to Facilitate Student Participation in Dual Enrollment Programs

Type of Practice	Example of Practice
Tone at the Top	<ul style="list-style-type: none"> • Support from leadership
Use of Technology	<ul style="list-style-type: none"> • Learning Management System (high school classes) • On-line dual enrollment classes • Social Media • School Web page • School email account • Every student is issued a laptop
Use of Signage	<ul style="list-style-type: none"> • Informational and Motivational throughout campus
Focus on Academics	<ul style="list-style-type: none"> • Academic Banquet
Career Academy	<ul style="list-style-type: none"> • Required for all 9th grade students
Freshman Academy	<ul style="list-style-type: none"> • Introduction to high school
Counseling Activities	<ul style="list-style-type: none"> • Teacher Advisor Program • College night
Collaborative Relationships	<ul style="list-style-type: none"> • Internal and External

The findings for this research question present evidence which agree with the literature and expand our understanding of the dual enrollment phenomenon. The findings demonstrated that Holtville High School viewed dual enrollment as an avenue for seamless transition to postsecondary institutions (Barnett & Stamm, 2010; Southern Regional Education Board, 2008). The high school used dual enrollment as an apparatus to keep students engaged in the learning process with the prospect of earning college credits (Southern Regional Education Board, 2008). The strategies utilized by the high school to attract students to participate in dual enrollment programs is consistent with the literature with the promoting of college aspirations in high school coupled with college counseling services (College Board, 2007). For example, the research

findings revealed in Table 3, that the matriculation rate for Holtville High School graduates for the 2015 academic year was 61.67%. Moreover, the high school's matriculation rate was comparable to the state's overall public-school enrollment rate of 64.34%. However, the dual enrollment participation of Holtville High School's student body was higher with 36% of the students graduating with postsecondary credits compared to the state's 7%. The results support a positive relationship exists for dual enrollment participation and postsecondary matriculation. The results also support the conclusion of the high school use dual enrollment as an apparatus to keep students engaged in the learning process with its institutional practices.

The literature highlighted the importance of colleges and universities establishing environments conducive for student success with transition support services (Kuh, Kinzie, Schuh, & Whitt, 2005). The findings for this research question have expanded academic knowledge by demonstrating the importance for secondary institutions to create conditions for student success with its institutional practices. Kuh et al. (2005) presented six common conditions existing at colleges and universities that promoted student success. The six conditions were "living" mission and "lived" educational philosophy; an unshakable focus on student learning; environment adapted for educational enrichment; clearly marked pathways to student success; an improvement-oriented ethos; and, shared responsibility for educational quality and student success. The findings for this research question found these conditions existed at Holtville High School and were paramount to dual enrollment participation.

The significance of creating environments conducive for success with transition support services is in the transactional nature of dual enrollment programs. The exchange of educational services begins with an interest in dual enrollment in high school and is carried out in postsecondary institutions. Embedded in the high school's strategies for dual enrollment

participation is the notion of support services which create conditions where student can be successful. The support services at Holtville High are consistent with Schlossberg's Transition Theory. The administrators and teachers have created an environment that assists students in coping with change. This environment also assists students in building the confidence needed to participate in dual enrollment programs. The focus on academics ensures students are prepared for postsecondary course work.

The discussion surrounding the guidance activities were consistent with findings in previous research *Can I Get A Little Advice Here? How an Overstretched High School Guidance System Is Undermining Student's College Aspirations* "For young people from less educated, lower-income families, the ability to know and talk to adults who are familiar with the higher education system can be essential" (Johnson, Rochkind, Ott, & DuPont, 2010, p. 9). Considerable importance was placed on providing practical college and career advice in high school as a critical component for matriculation to postsecondary institutions.

Research Question 2

How did the high school assist students in successfully completing dual enrollment programs? The findings for this research question agree with the literature. Innovative programs alone are not enough to ensure that students successfully attain postsecondary credentials. Researchers believe in the importance of collaborative relationships between secondary and postsecondary education (Farrell & Seifert, 2007; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007). The literature stated that it is critical for colleges to be enlightened concerning students and their salient issues in order to effectively assist students in overcoming barriers (Harper, 2007). The findings from this research build upon the literature by featuring the importance for secondary institutions to be enlightened about students and their salient issues.

Holtville High School placed great importance on faculty and administrators understanding the impact of poverty on their student population. These findings expand our understanding of the importance of both secondary and postsecondary professionals working to design programs which better assist students during their transition from secondary to postsecondary education (Watson, 1993).

Holtville High School places great emphasis on collaborative relationships with colleges and universities. The findings support the need for colleges and universities to collaborate with feeder high schools, to develop mirror programs, and to support students with their transition to higher education (Draeger, 2006; Watson, 1993). The literature advocates for a holistic approach to support services which includes expanded support services which commence in high school (Watson, 1993). The findings for this research question agree with the literature which advocates that student support services should begin in high school and include students' needs beyond the in-class experience. The results from the expansion of student services and support networks at Holtville High School enhanced student outcomes and yielded higher rates of graduation and matriculation (Draeger, 2006).

Research Question 3

What challenges does the high school face in the implementation of dual enrollment programs? The results for the final research question presented evidence that despite the success of dual enrollment participation at Holtville High School, students face the same challenges outlined in the literature (Bueschel & Venezia, 2006; Texas Guaranteed Student Loan Corporation, 2010; Haveman & Smeeding, 2006). The findings of major challenges were transportation, tuition, maturity, and incompatible systems. Transportation was problematic for many of the students interested in dual enrollment, especially for students interested in career

technical education dual enrollment programs at Holtville High School. The research findings of this study enhance the academic understanding of how high schools are assisting students overcome these barriers with institutional practices aimed at filling the gap for student populations who are most vulnerable to barriers. To address the barrier of transportation and tuition cost, Holtville High School partnered with universities to grant scholarships for online dual enrollment courses. It is important for postsecondary administrators to grasp an understanding of these barriers and work with secondary institutions to present solutions in order to improve postsecondary attainment levels.

The findings agree with the literature that incompatible systems such as comprehensive assessment tests used by secondary educators are not used or valued by postsecondary institutions causing many students to duplicate efforts by completing remedial (duplicate) courses (Bueschel & Venezia, 2006). The argument presented by Holtville High School teachers was compelling and added to the scholarly understanding of the issue from the secondary practitioner's viewpoint. The adoption of shared comprehensive assessment tools would eliminate barriers and provide clear goals for student readiness for matriculation to postsecondary institutions.

The case study findings revealed the overall success of the dual enrollment programs is reliant on successful collaboration between secondary and postsecondary institutions to eliminate barriers, especially for the underserved student populations. Holtville High School's decision to bus students to career technical education programs aligns with the literature as many school districts throughout the nation are absorbing transportation cost to increase postsecondary attainment rates in their districts. Some high schools are also paying tuition cost for both academic and career technical education dual enrollment courses. Statewide in Alabama,

community colleges offer full scholarships to students enrolled in career technical education dual enrollment programs.

The findings for this research question also agree with the literature concerning the importance of understanding maturity as a factor for nonparticipation in dual enrollment programs (Haveman & Smeeding, 2006). The literature points out that non-performing high schools fail to teach proper study habits for dual enrollment success. Holtville High School adopted strategies to help students develop discipline for academic work. The findings of this study identified the need for both secondary and postsecondary institutions to create conditions which promote student success (Kuh, Kinzie, Schuh, & Whitt, 2005).

Negative Case Analysis

Some findings in the research presented evidence which was somewhat dissonant with the literature. In recent decades, scholars have documented non-academic preparedness due to the courses taken during high school as a major barrier to postsecondary education (Katz & O'Leary, 2002; Lin & Vogt, 1996; Laird, Chen, & Levesque, 2006). However, the students at Holtville High School contradict these findings in the literature. The majority of students participate in academic dual enrollment programs where a minimum 3.0 GPA is required for participation. Students at Holtville High School demonstrate that they are not only academically prepared but highly motivated as well. The institutional support services prevent students who lack discipline for academic work from dual enrollment participation. There is another practice at Holtville High School which is out of accord with much of the findings which are extant in the literature. Some scholars document that low-income students often participate in career technical education dual programs; however, at Holtville High School, very few students are enrolled in career technical education dual enrollment programs (Karp & Hughes, 2008).

The literature cited the condition of the community and the classroom in schools located in lower socioeconomic neighborhoods as contributing a negative impact upon the educational aspirations of the students (Haveman & Smeeding, 2006; Kahlenberg, 2001; Advisory Committee on Student Financial Assistance, 2010). The condition of the community and the classroom at Holtville High School is an anomaly to this part of the literature. The student population at Holtville High School is mostly low income; however, high academic expectations are expected for every student. Institutional practices facilitate higher academic achievement from the student body and students are encouraged to dream big. Holtville High School has created a culture where high academic expectations translate to higher student participation in dual enrollment, higher graduation rates, and higher postsecondary matriculation.

A barrier to dual enrollment participation undiscovered in the literature was that some qualified students chose not to participate because they knew they would receive academic scholarships with the traditional matriculation to postsecondary institutions. These students chose to focus on extra-curricular activities instead. This small segment of the student population had high GPAs and were highly motivated academically. These students simply chose to take the traditional route to postsecondary matriculation. This finding presents a different perspective of viewing non-participation in dual enrollment programs.

Recommendations

The findings of this research study are consistent with findings listed in the previous research covered in the literature review section. Much has been written about the benefits of dual enrollment programs. The findings of this study are significant for policymakers, local school districts, superintendents, principals, and scholars.

Recommendations from a Policy Perspective

From the policy perspective, the state should adopt common institutional practices for dual enrollment and develop a mechanism to capture common data in order to document the effectiveness of innovative practices. The unique contribution which arose from this research endeavor was Holtville High School's focused on academic excellence resulting in a majority of dual students participating in academic focused dual enrollment courses. Currently, the state of Alabama does not offer scholarships for academic disciplines. A radical change in policy would be to offer funding to cover all dual enrollment courses. Currently, Tennessee pays for academic courses for students that meet the state's eligibility requirements for grade point average, grade level, and high school (Tennessee Higher Education Commission & Student Assistance Corporation, 2017). New York has adopted a policy to pay tuition for students from families with income up to \$125,000 (Jaschik, 2017).

The state of Alabama could benefit by combining secondary career technical education efforts across the state with postsecondary career technical efforts and award postsecondary credentials. The Tennessee Board of Regents adopted a pilot program to link select high schools to Tennessee's technical colleges (Tennessee Higher Education Commission & Student Assistance Corporation, 2017). This program is designed to provide students interested in career technical education fields of study greater opportunities to earn postsecondary credential while in high school.

Alabama had 63 career technical high schools across the state for the 2015-2016 academic year. This research documented that individuals with postsecondary career technical credentials earn significantly more than individuals with high school diplomas (College Measures, 2012; College Measures, 2015; College Measures, 2013; College Measures, 2014).

Additionally, this research demonstrated dual enrollment produced a positive impact on health and social capital with positive influences extending to the next generation (Robert Wood Johnson Foundation, 2009). Combining efforts should yield cost savings to state taxpayers by eliminating the duplication of efforts. More importantly, this effort will aid in the efficiency that will increase postsecondary degree or certificate completion for Alabama students.

From a national policy perspective, the federal government should adopt a full implementation of the “Expanding College Access Through the Dual Enrollment Pell Experiment” for students that meet the academic eligibility requirements (U.S. Department of Education, 2016). The mission of this program was to expand access to college by providing high school students access to Federal Pell Grants in high school. The research findings documented that financial barriers prohibit academically prepared students from participating in dual enrollment programs. A full adoption of the “Expanding College Access Through the Dual Enrollment Pell Experiment” would build opportunity structures for students from low income families and provide access to dual enrollment programs.

Recommendations for Research

The findings of this study include both practical and scholarly knowledge development. One practical area for future research is the need for further analysis of institutional practices for student transitioning to postsecondary via dual enrollment programs. It is necessary to understand why students enroll in dual enrollment programs and which institutional practices influence students’ decisions the most. The study findings indicated that innovational practices played an essential role in attracting student to dual enrollment programs. However, further analysis of students’ reasoning to participate or not participate will provide additional viewpoints to help improve student transition to postsecondary institutions. Given the level of student

participation in dual enrollment at Holtville High School, future research to include the students' perspective should provide a wealth of essential data for decision makers. Students' rationale for participation or non-participation should be compared to institutional practices which identify the strategies which are most effective in influencing students. The findings of such a study would assist in removing barriers to achieving postsecondary credentials.

A second practical area for future research is the fact that this study focused on the institutional practices at one public high school in Alabama. This is a limitation of the research. Similar case studies at multiple public high schools across the state could ensure the results can be more transferrable. The development of transferrable results should assist with the logistics of how to improve dual enrollment participation for Alabama high school students.

Finally, efforts to improve postsecondary attainment nationwide were investigated from the secondary and postsecondary perspectives. The examination of dual enrollment integration from these perspectives yielded data to assist policymakers develop plans to increase high school graduation rates, matriculation rates to postsecondary institutions, and plans to increase the overall level of postsecondary degree attainment. However, future research from a parental perspective could help to increase postsecondary attainment nationwide. Abundant data exist to help policymakers understand who the students are, their challenges, what motivates them, and theories to help with development and transition. Little research exists on who their parents are and what factors impact their decisions to allow their children to participate in dual enrollment programs. It is important to note that students cannot participate in dual enrollment programs without parental consent. This type of research would be helpful in providing insight to barriers which prohibit parents from allowing children to participate in dual enrollment programs.

Recommendations for Practical Applications

The findings presented in this research generated the following recommendations for secondary practitioners, students and parents outside of employment and enrollment at Holtville High School. The following seven recommendations are:

1. It is recommended for the state to create a plan to duplicate the institutional practices found in this research to help chart a course for success for students via the participation in dual enrollment programs. The positive correlation to overall matriculation rate and dual enrollment participation would support this recommendation. The research finding revealed the importance for administrators and teachers to create supportive environments to assist students with coping with change via transition services. Such institutional practices help students build the confidence needed to participate in dual enrollment programs.
2. It is recommended for high schools to generate synergy with students, parents, faculty, and staff to help students understand the importance of postsecondary credentials in modern economies. Synergy will help to develop practices to facilitate effective collaboration to promote dual enrollment participation. At Holtville High School, synergy is practiced with cross work-related teams set up to develop and coordinate efforts for postsecondary matriculation. The participation in dual enrollment programs support the high school's efforts for postsecondary matriculation. The faculty, staff, and administrators share knowledge and the results from synergy efforts is often the development of standardized processes and procedures developed to champion dual enrollment participation.

3. It is recommended that high schools establish relationships with postsecondary institutions (including four-year) within and outside of the geographical location of the high school to cultivate scholarship opportunities for students who want to participate in dual enrollment programs. The finding from the research corresponds with the literature that barriers, such as transportation and tuition, are challenges many low and moderate-income families must overcome. The institutional practices at Holtville High School works to help students remove those barriers by helping students to acquire scholarships from community colleges and four-year universities across the state. Additionally, the high school has posted on its website, scholarships information from out-of-state universities as well.
4. It is recommended that high schools duplicate the commitment to students via teacher advisor programs (TAP) and establish mentorships to help students overcome barriers to success. The research finding revealed that faculty, staff, and administrators believe the TAP program is the genesis to dual enrollment participation. At Holtville High School, TAP teachers develop authentic relationships with students and help support their academic achievement. Additionally, the research findings demonstrate that Holtville High School TAP teachers help students develop a sense worth by enabling them to set achievable academic goals.
5. It is recommended that high schools establish ethos of high expectation and hold students and faculty accountable to it. For teachers, ensure rigor and quality of education to ensure students are ready for postsecondary curriculum. For students, ensure they rise to the challenge with supportive institutional practices. At Holtville High School, messaging about college surrounds students, as described on Table 4.

The high school's use of the TAP teachers reinforces the philosophy of academic excellence. If a high school models Holtville High School's ethos of high expectations, it might improve institutional matriculation outcomes.

6. It is recommended that the state provide teachers and administrators with professional development opportunities to help them better understand the impact of poverty on student achievement in order to improve secondary professional practices. The leadership at Holtville High School placed significant importance on understanding the salient issues of the student body. By understanding the salient issues, the high school was able to develop adaptable institutional practices aimed at high school graduation and subsequent postsecondary matriculation.
7. It is recommended that high schools establish relationships with postsecondary institutions (including four-year) within and outside of the geographical location of the high school to develop mirror support services to help with transition anxiety. The research findings showed that such activities generated positive results for dual enrollment participation and subsequent postsecondary matriculation. For example, Holtville High School, the community colleges, and universities have "College Night" activities. For first generation students, this event introduces the students and their parents to needed information on "how to" and "what to do" in the enrollment process. College nights provides valuable information to students, for what many feel, is a daunting endeavor.

Conclusions

Dual enrollment programs present clearly defined pathway to postsecondary credentials for Holtville High School students. The conclusion drawn from this research is the findings provided examples of innovative institutional practices which generate higher student participation in dual enrollment programs. The high school created an instructional environment with high academic expectations in conjunction with a supportive community that helps students capitalize on available educational opportunities. The findings highlight the positive effect collaborative relationships play in students' participation and ultimate matriculation to postsecondary institutions.

Also included in the findings was the importance of support services to student success. The high school provides students with a broad array of support services. The research findings show that Holtville High School dual enrollment participation can be attributed to a strong focus on support services like, the teacher advisory program. The support services give students advantages in obtaining college credits.

The findings also reflect the institutional practices are student-centered approaches to dual enrollment implementation. The high school use of data to formulate practices to help students overcome obstacles to success. The institutional practice requiring all faculty and staff to attend poverty workshops has proven beneficial to students at Holtville High School.

The challenges posed by the research respondents was consistent with the literature. The major challenges presented were transportation, tuition, maturity, and incompatible systems. Despite the challenges the high school persists in gathering support and student participation in dual enrollment programs. The findings revealed the core belief of faculty, staff, and administrators is that student support services ease the transition to each level of academic

achievement. The findings revealed the importance of institutional practices and transition services to dual enrollment participation.

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APPENDIX A:

DUAL/CONCURRENT ENROLLMENT NATIONAL PROFILE

Program Characteristics	Number	States
Statewide policy	46 *	AL,AZ,AR,CA,CO,CT,DE,FL,GA,HI,ID,IL,IN,IA,KS,KY,LA,ME,MD,MA,MI,MN,MS,MO,MT,NE,NV,NJ,NM,NC,ND,OH,OK,OR,PA,SC,SD,TN,TX,UT,VT,VA,WA,WV,WI,WY
Mandatory program offering	12	AR,AZ,DE,FL,IN,IA,MI,MN,NM,OK,SD,WI
Voluntary program offering	20 **	AL,CA,CT,KY,LA,MD,MS,MO,MT,NE,NV,NJ,NC,OR,PA,TX,UT,VA,WV,WY
Both Mandatory and Voluntary program offering	5***	KS,OH,ME,VT,WA
School district pay tuition	11 ****	CT,FL,TN,NM,NC,OR,VA,VT,WA,WI,WY
Student pay tuition	37	AL,AK,AZ,AR,CA,CO,DE,GA,HI,ID,IL,IN,IA,KS,KT,LA,ME,MD,MA,MI,MN,MS,MO,MT,NE,NV,NH,NJ,NY,ND,OH,OK,PA,RI,SD,TX,UT
College partner both 2 year and 4 year	39 *****	AL,AR,CA,CO,DE,FL,GA,HI,ID,IN,IA,KS,KT,LA,ME,MA,MI,,MN,MS,MO,MT,NE,NV,NJ,NM,ND,OH,OK,OR,PA,SC,SD,TN,TX,UT,VT,WA,WV,WI,WY
2 year only	5	AZ,CT,IL,MD,NC
Courses provided both college and high school campus	29	AL,AZ,CA,CO,CT,DE,FL,ID,IL,IN,IA,KS,LA,MN,MS,MO,MT,NV,NJ,NM,NC,ND,OK,SC,SD,TN,TX,WV,WY
College campus	2	GA,WI
High school campus	***** *	
Online	20	DE,ID,IN,IA,LA,MI,MS,NE,NV,NM,ND,OH,OK,OR,SC,SD,TN,TX,VA,WA
Student Eligibility requirements	40	AL,AZ,AR,CA,CO,CT,DE,FL,GA,HI,ID,IL,IN,IA,KS,KT,LA,ME,MI,MN,MS,MO,MT,NE,NV,NM,NC,ND,OH,OK,OR,PA,SC,SD,TX,UT,VA,WA,WV,WI
Grade point average	12	AL,CT,FL,KS,LA,ME,MS,MO,NE,OH,OK,SC
Grade level	28	AL,AZ,CO,CT,GA,HI,ID,IL,IN,IA,KS,LA,ME,MI,MN,MT,NE,NV,NC,ND,OR,PA,SC,SD,TX,UT,VA,WA
Written approval /recommendation	26	AL,AR,CA,CT,GA,HI,IA,KS,LA,ME,MI,MS,MO,NV,NM,NC,ND,OH,OK,SC,TX,UT,VA,WA,WV,WI
Postsecondary entrance requirements	25	AL,AZ,AR,DE,FL,HI,IL,IN,KS,KT,ME,MI,MN,MO,NM,OH,OK,OR,PA,SC,SD,TX,UT,VA,WA
Instructor and course quality	13	AL,AZ,DE,FL,ID,IN,IA,KS,NM,NC,OR,PA,TX,

Source: Education Commission of the States March 1, 2013

*Four states administer dual enrollment at the local school districts and participating postsecondary institution, not through a statewide policy.

** Nine states do not have mandatory or voluntary language in state policy

***Three states require mandatory program offering with variations in voluntary options

**** School districts, postsecondary institutions, state department of education, and other groups are among the responsible parties in 22 states

***** Twenty-three states allow other institution types (proprietary, nonpublic, and tribal) to participate in dual enrollment programs and five states do not specify in state policy.

***** No state restricts course offering to high school campus only, however, ten states allow course offering at other locations. Eighteen states do not stipulate location for course offering.

APPENDIX B:

CONSENT FORM FOR NONMEDICAL INTERVIEW STUDY

Individual's Consent to be in a Research Study

You are being asked to be in a research study. This study is called "A Study of High School Dual Enrollment Participation at Alabama's Public Colleges and Universities." This study is being done by Ms. Rosa C. Spencer. She is a doctoral candidate in the Department of Higher Education Administration at The University of Alabama, Ms. Spencer is being supervised by Dr. Claire Major, Department Head, Professor in the Education Leadership, Policy and Technology Studies, and the Higher Education Administration at The University of Alabama. Because this study is a partial fulfillment of degree requirements, Ms. Spencer is not receiving any salary or monetary compensation for completing this project.

What is this study about?

The intent of this qualitative study is to seek a better understanding of dual enrollment implementation and the factors that facilitate student participation. The purpose of this study is to identify educational practices that facilitate student participation in dual enrollment programs in addition to increasing our understanding of practices that promote dual enrollment participation. Much has been written about the positive benefits for students that participate in dual enrollment programs; however, the current literature does not identify established educational practices that lead to higher student participation. Despite the increasing participation of dual enrollment programs, little is known about the process by which high schools implement their programs to increase student participation. Therefore, the gap in the literature, which this research study will seek to fill, is to discover the salient actions and cultural beliefs at high schools in the state of Alabama which have higher student participation in dual enrollment programs.

Why is this study important—What good will the results do?

An intense examination of educational practices at a thriving high school that attracts students to participate in dual enrollment programs will provide insight into ways in which Alabama high schools may increase the postsecondary attainment rate of its graduates. This study is important because the findings will serve as a blueprint for quality dual enrollment program execution and focus needed attention on institutional practices to help high schools overcome barriers to student participation. This study may also stimulate valuable discussions on how to increase the number of postsecondary credentials obtained by Alabama high school graduates.

Why have I been asked to take part in this study?

You have been asked to participate in this study because you serve as a high school administrator, guidance counselors, or teachers at a public high school in Alabama.

How many other people will be in this study?

The investigator will interview high school administrator, guidance counselors, and teachers. Teachers will be selected based upon their involvement in dual enrollment activities. Particular attention will be focused on the role each employee has in initiating student participation in dual enrollment.

What will I be asked to do in this study?

If you agree to be in this study, Ms. Spencer will conduct a single interview with you at the high school. The interview will last approximately 60-90 minutes. Ms. Spencer will use a semi-structured interview question protocol as a guide for the interview, and the interview will be audio recorded and transcribed. Every effort will be made to protect your privacy. Your name will not be used in any publications that result from this study, and any potentially identifying comments will be masked as much as possible without distorting the meaning of your responses.

How much time will I spend being in this study?

The preliminary questionnaire prompt is not timed. The interview should last approximately 1.5 hours, depending on how much information about your perceptions you choose to share.

Will being in this study cost me anything?

The only cost to you from this study is your time.

Will I be compensated for being in this study?

There will be no financial remuneration for participating in this study.

What are the risks (problems or dangers) from being this study?

There are no foreseeable risks.

What are the benefits of being in this study?

There are no direct benefits to you. However, I will attempt to learn from your insight and experiences, as high school administrators/teachers, valuable first-hand information. The findings will serve as a blueprint for quality dual enrollment program execution and focus needed attention on institutional practices to help high schools overcome barriers to student participation. This study may also stimulate valuable discussions on how to increase the number of postsecondary credentials obtained by Alabama high school graduates.

How will my privacy be protected?

Your identity and participation in the study will be known only to me and to you. You are free to decide where and when I will conduct the private, one-on-one interviews so you may talk without being overheard. When I reports findings and/or publishes any articles using this data, she will use pseudonyms to ensure participants' anonymity.

How will my confidentiality be protected?

All data collected for this study-- the audio tapes, transcripts of the interviews and critical incidents -- will be kept on a password encrypted hard drive locked in Ms. Spencer's home office. She will be the only person with access to the data. The data will be retained on her hard drive for a period of five years after the study is completed. At the end of five years, all data will be shredded and/or incinerated. When I reports findings and/or publishes any articles using this data, she will use pseudonyms to ensure participants' anonymity.

What are the alternatives to being in this study?

The only alternative is not to participate.

What are my rights as a participant?

Being in this study is totally voluntary. It is your free choice. You may choose not to be in it at all. If you start the study, you can stop at any time. Not participating or stopping participation will have no effect on your relationships with me.

The University of Alabama Institutional Review Board is a committee that looks out for the ethical treatment of people in research studies. They may review the study records if they wish. This is to be sure that people in research studies are being treated fairly and that the study is being carried out as planned.

Who do I call if I have questions or problems?

If you have questions about this study, please ask them. Please contact me by phone at (334) 207-0567 or via email at: rspencer@crimson.ua.edu.

You may also contact the chair of my dissertation committee, Dr. Claire Major, Department Head, Professor in the Educational Leadership, Policy and Technology Studies and in the Higher Education Administration Program at The University of Alabama, via phone at (205) 348-1152 or through mail at the following address:

Dr. Claire Major
College of Education
The University of Alabama
301C Graves Hall
Box 870231
Tuscaloosa, Alabama 35487-0231

If you have questions about your rights as a study participant or at any time become dissatisfied with any aspect of this study, you may anonymously contact Ms. Tanta Myles, The University of Alabama Research Compliance Officer, at (205) 348-8461 or toll free at 1-877-820-3066. You may also ask questions, make a suggestion, or file complaints and concerns through the IRB Outreach Website at http://osp.ua.edu/site/PRCO_Welcome.html. After you participate, you are encouraged to complete the online survey for research participants, which is located at the site

above. If you prefer, you may ask Ms. Spencer for a hard copy of the transcript. Should you have further questions, you may send an e-mail to participantoutreach@bama.ua.edu.

I have read this consent form. I have had a chance to ask questions.

Signature of Research Participant Date

Signature of Investigator Date

Yes, you have my permission to audio record the interview.

No, I do not want my interview recorded.

Signature of Research Participant Date

Signature of Investigator Date

APPENDIX C:
INTERVIEW PROTOCOL

Interview # _____
Date _____/_____/_____

Script

Welcome and thank you for your participation today. Your participation in this interview is completely voluntary. My name is Rosa C. Spencer and I am a graduate student at The University of Alabama. I am conducting a study on dual enrollment in the partial fulfillment of the requirements for the degree of doctorate in higher education administration. I would like your permission to tape record this interview, to accurately document the information you provide. All of your responses will remain confidential. Your responses will be used to develop a better understanding of dual enrollment implementation and the factors that facilitate student participation. The purpose of this study is to identify best practices that facilitate student participation in dual enrollment programs in addition to increasing our understanding of practices that promote dual enrollment participation.

If at any time you need to take a break, or return to a question, please let me know. Do you have any questions or concerns before we begin? Then with your permission we will begin the interview.

Overarching research questions:

- 1) What strategies do successful high schools use to attract students to participate in dual enrollment programs?
- 2) How do successful high schools assist students in successfully completing dual enrollment programs?
- 3) What challenges does the high school face in the implementation of dual enrollment programs?

APPENDIX D:

OBSERVATIONAL PROTOCOL

Date _____

Location _____

Conduct a walk-thru of the campus with your host and document the following observations:

1. Information Centers (ex. bulletin boards, signage, etc....) describe information listed.
2. Printed materials list and obtain copies.
3. List things you expected to see but didn't.
4. Diagram the physical setting.

APPENDIX E:

INTERVIEW FORM

1. What activities take place with regard to dual enrollment?

Response from Interviewee:

Reflection by Interviewer:

2. How do students learn about dual enrollment?

Response from Interviewee:

Reflection by Interviewer:

3. Can you describe in detail the challenges (internal and external) you face in program implementation?

Internal - Response from Interviewee:

Reflection by Interviewer:

External- Response from Interviewee:

Reflection by Interviewer:

4. Can you describe in detail the challenges you face in generating student participation in dual enrollment programs?

Response from Interviewee:

Reflection by Interviewer:

5. Can you describe some details of what you have learned about dual enrollment implementation? Is this experience similar to your expectations?

Response from Interviewee:

Reflection by Interviewer:

How do you generate enthusiasm for dual enrollment on your campus?

Response from Interviewee:

Reflection by Interviewer:

6. How is enthusiasm displayed for dual enrollment?

Response from Interviewee:

Reflection by Interviewer:

7. Could you tell me about the overall academic climate at your high school?

Response from Interviewee:

Reflection by Interviewer:

8. What is it like for a new student who arrives on campus for the first day?

Response from Interviewee:

Reflection by Interviewer:

9. Can you describe specific practices that spark inquiry about dual enrollment programs?

a. If no practice comes to mind, how about a tasks or exercises?

b. Why was this incident significant?

Response from Interviewee:

Reflection by Interviewer:

10. How does the overall climate at your high school influence students with regard to participating in dual enrollment?

Response from Interviewee:

Reflection by Interviewer:

11. What comment have graduated dual enrollment students made about the program at your school?

Response from Interviewee:

Reflection by Interviewer:

12. Thinking about your previous answers, what factors then would you specifically identify as influencing your students? Please explain why you think these are factors. (List responses, assess if positive or negative influences, and reasons why):

Response from Interviewee:

Reflection by Interviewer:

13. Among the factors, the literature reported as being influences to student participation are gender, academic preparedness, and socioeconomic status. I would like to discuss these factors with you specifically. (If already covered above, skip or elaborate as needed).

- a. AGE: Do you think age affects student participation? Why or why not?
- b. ACADEMIC PREPAREDNESS: Do you think academic preparedness affects student participation? Why or why not?
- c. SOCIOECONOMIC STATUS: Do you think socioeconomic status affects student participation? Why or why not?

14. Before we conclude this interview, is there anything else you would like to share?

Reflection by Interviewer

- Closure
 - Thank you to interviewee
 - reassure confidentiality
 - ask permission to follow-up _____

Thank the participant for his/her participation.

APPENDIX F:

IRB APPROVAL



Office of the Vice President for
Research & Economic Development
Office for Research Compliance

April 17, 2017

Rosa Spencer
College of Education
Box 870231

Re: IRB#: 17-OR-139 "A Study of High School Dual Enrollment Participation at Alabama's Public College and Universities"

Dear Ms. Spencer:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on April 13, 2018. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent form to provide to your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

A black rectangular redaction box covering the signature of the Director & Research Compliance Officer.

Carpanato T. Myles, MSM, CIM, CIP
Director & Research Compliance Officer

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