A CASE STUDY EXAMINING THE INFLUENCE OF DUAL ENROLLMENT AND HIGH SCHOOL ADVISING ON STUDENT PERSISTENCE IN COLLEGE

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Maureen Raia-Taylor

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ABSTRACT

This qualitative, descriptive single case study describes the problem of student persistence in college through the theoretical lens of Alexander Astin’s Theory of Student Involvement, and Vincent Tinto’s Theory of Student Departure. The decline in the college retention rate in the United States over the last twenty years and the high student attrition rate in colleges and community colleges is an issue of national concern. The theories enabled the researcher to narrow the scope of the study to focus on the pre-college experiences, high school faculty advising and dual enrollment, of college sophomores and describe how the perceptions of the study’s participants, observations and student data led to the research findings.

The relationship of the high school advisors in supporting students while in dual enrollment courses and the perceived influence on college persistence is the focus of the study. The research questions guiding the study were:

1. How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students?

2. How do former dual enrollment students enrolled in the sophomore year of college perceive the support they received from high school faculty advisors?

The findings revealed that:

1) Student motivation and confidence were positively influenced by advising of dual enrollment students.

2) Dual enrollment and faculty advisor-student interaction led to an understanding of commitment to goals through the use of the Learning Plan.

3) College sophomores viewed the support of high school faculty advisors in encouraging student self-advocacy with dual enrollment professors as having a positive influence on their college experience.

4) Dual enrollment students’ in-class interaction with college students aided in their transition to college.

The trustworthiness of this study is grounded in the collection and analysis of the data that will guide other researchers in the utilization of the study.

Key words: dual enrollment, faculty advisor program, high school/college partnership, student support, student persistence and college retention.
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CHAPTER I  INTRODUCTION

The full-time freshman-to-sophomore college retention rate for public community college students in the United States in 2007 was 59.0% (National Center For Higher Education Management Systems, 2009, p. 4). Freshman-to-sophomore year retention rates are an important indicator for students aspiring to obtain an associate or bachelor’s degree. This measure ensures that students are on track to completing an associate or bachelor’s degree in a timely manner which is three years for associate degree–seeking students and six years for bachelor’s degree–seeking students (The College Board Advocacy and Policy Center, 2010). William Bowen in, Crossing the Finish Line, (2009) speaks about the transition from high school to college as having a significant impact on students’ completing college (Bowen, Chingos, & McPherson, 2009). Many higher education institutions have implemented transition programs and courses for freshmen, but the retention rate is still an issue. The 2003 and 2010 Act, Inc. institutional data files indicate that the public community college persistence to degree rate in three years was 29% in 2003 and 24% in 2010 (Act, Inc., 2010).

One program that has aided students in transitioning to community and four-year colleges is the dual enrollment program (Bailey, Hughes, & Karp, 2002). In dual enrollment (sometimes called concurrent enrollment), high school students usually take college-level courses during their junior and senior years. Forty-five states allocate funds to support college tuition costs for high school juniors and seniors enrolled in dual enrollment (Bailey, Hughes, Karp, & Fermin, 2005). The benefit for students is early
access to studying on a college campus, accumulation of college credits while in high school, and exposure to challenging courses.

What the research has not extensively explored is the influence of the high school faculty advisor’s support of dual enrollment students and their persistence to the second semester of the sophomore year in college. This study has focused on the problem of student retention with an emphasis on the high school/college dual enrollment partnership and high school faculty advisor support.

The research was designed to study the high school/community college dual enrollment partnership with support from high school faculty advisors at a non-traditional career and technical education high school and its influence on student continuation through the first semester of the sophomore year in college. This qualitative, descriptive single case study involved interviewing seven high school faculty advisors, the high school college liaison, three college administrators, and seven college students who were enrolled in dual enrollment courses when at the career and technical high school.

Another method of data collection used in this qualitative research approach was the observation. The researcher observed the interaction of high school faculty advisors and current dual enrollment students during the one-on-one advisor-advisee session and a 45-minute individual exhibition by the students.

The third method of data collection was through the gathering of student records that documented dual enrollment courses and credits earned by the students from 2008-2010.

The themes of advisor support of students, faculty - student involvement, dual enrollment collaboration and partnership, and student persistence emerged in the
interview data and reflected Alexander Astin’s Theory of Involvement and Vincent Tinto’s Theory of Departure.

Triangulation of the data from student records, interviews, and observations was used to increase the validity of the study.

**Practical and Intellectual goals**

The practical goal was to reduce a student’s time in college by accumulating college credit through the dual enrollment program while in high school. The support from high school advisors and teachers eased their transition to college.

The intellectual goal of the study was to contribute to the existing research on student persistence and retention in college through the study of advisor support in high school and the impact on dual enrollment students in college. The goal was to lend support to a formal program of high school advising proposed by the New England Association of Schools and Colleges (2009) in order “to assist students in achieving a school’s 21st century learning expectations” (p.5).

**Significance of the Problem**

There is a direct relationship between the level and quality of education of the residents of the United States and the economic growth of the country. According to Tom Wood, former academic correspondent, National Association of Scholars, “A work force with high cognitive skills can raise economic growth by two-thirds of a percentage point each year” (Wood, 2009, p. 10). Higher education sharpens students’ critical thinking and analytical skills, the core of cognitive development. The US Department of Labor collects data annually on the relationship of education to employment. The latest figures from 2009 follow past trends, which equate low unemployment to highest degree of education.
The average unemployment rate for a person with a bachelor’s degree was 5.2 percent, while a high school graduate had a 9.7 percent rate of unemployment. The median yearly income for a bachelor’s level was $45,000 or higher (US Department of Labor, 2009).

President Barack Obama’s education plan, announced at the University of Texas, underscores the need for increasing the college completion rate and the need for more Americans to earn degrees in the next decade (Jones, 2010). Many states have implemented the dual-enrollment program for several years (Bailey et al., 2005). There is an opportunity to capitalize on a funded program that in some studies has shown success for students continuing to degree completion (Mead, 2009, Williams, 2010). The dual enrollment program is structured to give high school students interested in college an opportunity to take college courses while in high school. Students who are undecided about college should also be offered the opportunity of taking dual enrollment classes since early access and exposure to college while in high school increases the likelihood of college persistence (Swanson, 2008). Building on an existing program that has proven success may further the President’s initiative of more Americans earning degrees by 2020.

Research Questions

During the course of the research the following questions were used to guide the study:

a) How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students?

b) How do former dual enrollment students enrolled in the sophomore year of college perceive the support they received from high school faculty advisors?

The research questions focus on support systems, specifically counseling and advising.

The research questions were addressed by analyzing the relationship between Alexander
Astin’s Theory of Student Involvement and Vincent Tinto’s Theory of Student Departure and the advising support dual enrollment students received that led to persistence in college.

**Theoretical Framework**

This qualitative case study described how the influence of high school/community college dual enrollment partnerships with support from high school faculty advisors on college retention was guided by the theories of Alexander Astin and Vincent Tinto (1975, 1993). Alexander Astin’s theory of student involvement and Vincent Tinto’s theory of student departure framed the research on dual enrollment, high school/community college advising and student retention in college. Ernest Pascarella and Patrick Terenzini (1991) lent support to the theories of Astin and Tinto through their work on the impact of student advising and patterns of relationships between student-faculty interaction outside the classroom and the effect on freshman year retention.

Alexander Astin's theory of involvement suggests that students learn more the more they are involved in both the academic and social aspects of the college experience (Astin, 1984, p.292). Vincent Tinto’s Theory of Departure is predicated on the research that students leave college because they are lacking the support mechanisms that guide them through a positive college experience (Tinto, 1987).

Both theories provided a theoretical framework in determining if the high school/community college dual enrollment partnership with support from the high school advising program lent support to dual enrollment students, increasing the likelihood of college retention.

**Theory of Student Involvement**
Alexander Astin’s Theory of Student Involvement was an outgrowth of a 1975 longitudinal study on college dropouts (Astin, 1975). Alexander Astin refers to student involvement as “the amount of physical and psychological energy that the student devotes to the academic experience” (Astin, 1999, p. 518). He describes a highly involved student as one who devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students (Astin, 1999, p. 518). Astin depicts the Theory of Student Involvement through an integration model which demonstrates the relationship between student inputs (I), the college environment (E) and student outputs (O). Student inputs (I) refer to the talents, skills, aspirations and other potentials for growth and learning that the new student brings with her to college (Astin, 1970, p. 3). Students who participate in the dual enrollment program bring experience of interacting with faculty and peers in a college classroom. The advisor-advisee high school/college partnership lends support to students in the dual enrollment program, allowing for growth potential. Frequent interaction with faculty is more strongly related to satisfaction with college than any other type of involvement or, indeed, any other student or institutional characteristic (Astin, 1999, p. 525). Dual enrollment students receiving support from faculty advisors while in high school bring an expectation and familiarity with the faculty–student relationship when entering college.

Students entering the college environment (E) with experience in a college classroom, peer associations and familiarity with faculty/student support, are more likely to transition and integrate into the college setting (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007, p. 65). Because many dual enrollment programs include time on campus
and exposure to the non-academic side of college, they can serve as a demystifying experience for students and ease the psychological transition to college (Bailey, Hughes, & Karp, 2002, p. 2).

Astin’s model of integration includes a third component which is student outputs (O), the measure of students’ achievements, knowledge, skills, values and attitudes; a measure of the impact of college (Astin, 1970, p. 2). The measurement of postsecondary success for this study is student completion of the first semester of the sophomore year in college. Astin (1984) and Pascarella and Terenzini (1980) suggest that the greater students are academically integrated in the life of the institution, the greater the likelihood that they will persist. Figure 1 Demonstrates the application of Astin’s Integration Model to this research.

![Figure 1 Application of Astin’s Student Integration Model to Thesis Proposal]
The diagram demonstrates that a student’s pre-college experience (Inputs) impacts their college experience (Output) leading to the desired outcome, (Outcome) which is persistence to second semester of sophomore year. The research undertaken for this study supports Alexander Astin’s findings by showing that the high school/community college dual enrollment partnership with support from high school faculty advisors at a career and technical education high school has a positive impact on student persistence through the first semester of the sophomore year in college.

**Theory of Student Departure**

Vincent Tinto’s Theory of Student Departure (1975) is based on the study of suicide derived from the work of Emile Durkheim and William Spady (Tinto 1993, p. 100). Spady’s application of Durkheim’s theory to student persistence in college focused on egotistical suicide, which presents as an individual who is unable to integrate and form relationships within a community. In order for a person to establish membership in a community, Emile Durkheim referred to two forms of integration: social and intellectual (Tinto, 1993, p. 101). Tinto expanded on William Spady’s study of student persistence by incorporating the three rites of passage: separation, transition and incorporation, developed by anthropologist Arnold Van Gennep (Van Gennep, 1960). Tinto’s first stage of passage to college emphasizes the need for the student to separate from former communities. According to Tinto failure to separate makes integration into the new college community problematic (Tinto 1993, p. 95). The second stage, transition between high school and college, is the entry to the centerpiece of Tinto’s theory, integration into the society of the college. Tinto acknowledges that a student’s ease of transition is dependent on his/her previous experiences and background characteristics. He is a
supporter of learning communities and the freshman seminar to support students in the
transition stage (Tinto, 2003, p. 1). In the process of transitioning the student also begins
to integrate into the life of the college. Tinto maintained that college success is predicated
on both the prior academic preparation of the student and the degree to which the student
bonds academically and socially within the college community.

Tinto’s Model of Persistence outlines the necessary social and academic
experiences needed for a student to achieve academic and social integration in order to
persist to degree attainment. He refers to academic integration as the degree to which
new students accept and incorporate the academic norms of the college (Tinto, 1994).
_Academic integration_ is based on the strength of the individual student’s academic
expectations, goals and motivation. _Social integration_ is based on the degree to which
students become engaged with the social life of the college. College social involvement
includes membership in student organizations, and attendance at cultural, athletic and
recreational events. It includes engagements with faculty members outside the classroom.
It also involves forming new friendships with other college students. It was anticipated
that living on campus would increase social integration (Tinto, 1993, p. 101).

Tinto’s model addresses the conditions that contribute to early withdrawal from the
institution. According to Tinto, students begin their college careers with pre-college
experiences and attributes. These experiences influence students’ commitments to
educational goals as seen in Figure 2. Tinto identifies two individual characteristics
central to the issue of student departure: intention and commitment (Tinto, 1993, p. 37).
The student’s goal commitment is enveloped by the institutional experiences, both
academic and social (Figure 2) and it is at this juncture that the degree of academic and
social integration begins to influence the student’s goals and motivations and departure decision (Figure2).

![Figure 2 Tinto’s Model of Persistence](Pacific Policy Research Center, 2010, p. 30)

According to Tinto attrition is a longitudinal process. The student brings to college such characteristics as family background (socioeconomic status, parental values), personal attributes (academic ability and personality traits) and social and academic achievements. Once in college, Tinto asserts that it is the responsibility of the college or university to promote student persistence (Tinto, 2003, p. 2).

The application of Tinto’s Model of Persistence to the research thesis focuses on academic and social integration of second semester college sophomores who were
involved in dual enrollment and supported by the high school/community college partnership.

Figure 3, Application of Tinto’s Model of Student Departure, suggests the reasons why a dual enrollment student supported by the faculty advisor program integrates into college life both academically and socially. The pre-college experiences and attributes of the career and technical high school students are enrollment in dual enrollment and support from the faculty advisor program. The experiences that the students bring to college influences their educational goals and commitments. The transition into academic integration is impacted by the students’ dual enrollment experience, which leads to familiarity with academic expectations. Enrollment in the dual enrollment program and accumulating college credits, defines the student’s intention to attend a postsecondary institution (Bailey, 2007). The high school/community college partnership bridges the transition to college and eases integration into the academic community.

Positive social integration into the college community is influenced by the high school faculty advisor-student relationship. The career and technical high school model encourages faculty advisor-student interaction by assigning students to the same advisor during their four years in high school.

Students at the career and technical high school are involved in a mentorship program that encourages student involvement in the application of learning to real world experiences. Their interaction with adults through the mentorship program aids in social integration.
### Pre-College Experiences/Attributes
- Prior learning experiences—students are enrolled in dual enrollment classes
- Students are supported by faculty/advisor program

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<th>SOCIAL INTEGRATION</th>
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<td><strong>Faculty advisor-student interaction</strong></td>
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<td>• Dual enrollment experience leads to familiarity with academic expectations.</td>
<td>• Career &amp; Tech. H.S. model encourages faculty advisor-student interaction. Four years with the same advisor.</td>
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<td>• Enrollment in dual enrollment program, accumulating college credits, defines the student’s intention to attend postsecondary institution (Bailey, 2007).</td>
<td>• Dual enrollment experience with college faculty.</td>
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<td>• High school/community college partnership bridges the transition to college and eases integration into the academic community.</td>
<td><strong>Student Organization involvement</strong></td>
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<td>• Career &amp; Tech. H.S. model encourages student involvement in creating entrepreneurship models.</td>
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<td></td>
<td>• Community service and Internships.</td>
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<td>• All students in the high school involved in internships and service to the community.</td>
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<th><strong>Living on campus</strong></th>
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<td>• Advisor partnership encourages college enrollment.</td>
<td>• Students attending the community college commute to school. They currently commute to the community college for dual enrollment.</td>
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<tr>
<td>• High school college and career counselor discusses future careers and academic preparation.</td>
<td>• Students attending 4-year college may or may not live on campus.</td>
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<tr>
<td>• Student internship mentor engages student in conversation about future aspirations.</td>
<td><strong>Committed to reach academic goals</strong></td>
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| **Demonstration of motivation in high school** |

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**Figure 3 Application of Tinto’s Model of Student Persistence to Research Study**

**Summary of Theories**
Student retention in college is a significant issue in the United States. The literature includes several reviews of studies researching the problem, but none as comprehensive as Vincent Tinto’s conceptual model for understanding attrition as a longitudinal predictive process (Pascarella & Terenzini, 1977, p. 540). Tinto’s model of institutional departure is based on understanding the support systems that affect student success in college. According to Tinto there are five conditions that promote student success within universities: institutional commitment, institutional expectations, support, feedback, and involvement or engagement (Tinto & Pusser, 2006, p. 6, 7). Academic and social integration, based on Tinto’s theory, is the condition for student success that guided this research in describing the dual enrollment partnership supported by the high school faculty advisor program, and the perception of the influence on college retention through the first semester of the sophomore year in college.

The relationship of Alexander Astin’s Theory of Student Involvement to student retention is focused on one who “devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (Astin, 1999, p. 518). Whereas Tinto’s conceptual model is longitudinal, Astin’s is specific to involvement. Astin depicts the theory of student involvement through an integration model which demonstrates the relationship between student inputs (I), the college environment (E) and student outputs (O). The application of Astin’s model guided this research in describing the process of integration of the dual enrollment high school/community college partnership and the high school faculty advisor program and the perception of influence on student persistence through the first semester of the sophomore year in college.
CHAPTER II  LITERATURE REVIEW

Introduction

The purpose of the literature review was to review the body of literature and research that was relevant to student retention in college and examine how the literature informed this study. The study was guided by the research questions that query the influence of dual enrollment partnerships supported by high school faculty advisors and the perception of the effect on college retention for enrolled students. The literature review was guided by the theoretical works of Alexander Astin and Vincent Tinto and focused on:

- The research regarding the importance of college persistence and retention in the United States.
- The influencing factors that thwart college persistence.
- The evidence of dual enrollment programs that have positively impacted college persistence and retention.
- The research that exists on the impact of high school/college faculty advising partnerships on college persistence and retention.

The literature review concludes with a summary of the findings.

The importance of college persistence and retention

The importance of higher education is not a new phenomenon in the United States. Early in our history Thomas Jefferson advocated public higher education “to foster an informed citizenry and also as an investment in the nation’s economic future”(Hunt & Tierney, 2006, p. 1). A problem that we as a nation face is degree completion and the impact on our quality of life and global competitiveness. Higher education in the United
States is deemed necessary in order for high school graduates to access rewarding careers. Some experts predict that within a decade 90 percent of all jobs will require skill levels beyond those gained in high school (Burkum, Habley, Mcclanahan, & Valiga, 2010). In order for students to attain skills needed beyond high school they need to persist in their pursuit of a college degree. Ben Bernanke, chairman of the Federal Reserve Board, addressed the issue of retention when he spoke to the Harvard graduating Class of 2008 stating that “the best way to improve economic opportunity and to reduce inequality is to increase the educational attainment and skills of American workers” (Bowen, Chingos, & Mcpherson, 2009, p. 1). According to the Council on Competitiveness only US households headed by a college graduate saw their incomes rise over the past twenty years (Council on Competitiveness, 2007). In 2008 the median earnings of young adults with a bachelor's degree was $46,000, while the median was $36,000 for those with an associate's degree, $30,000 for those with a high school diploma or its equivalent, and $23,500 for those who did not earn a high school diploma or its equivalent (National Center For Educational Statistics, 2010).

J.P. Bean further discussed this financial reality: “For individuals, departure from college before graduating can represent a personal failure to achieve educational objectives, an income about 15 percent below that of contemporaries who graduate from college, and the opportunity cost of an investment that will yield little financial benefit” (Bean, 1990, p. 190). Vincent Tinto addresses the long-term benefits of attaining a degree stating that:

For our nation, the benefits of increased college completion are clear. People with a college education are much more likely to participate effectively in the
governance of the nation, contribute their time and money to community
service, consume fewer public services, and commit fewer crimes. They also
contribute more to economic growth and productivity helping to create a larger
economic pie for all to share (Tinto, 2004, p. 6).

The benefits of a college degree are addressed in the 2007 Trends in Higher
Education Report published by The College Board. The focus is on the monetary and
non-monetary benefits of higher education for individuals and society. The report utilizes
US Census Bureau and Internal Revenue Service 2006 data in proposing a positive
correlation between higher levels of education and higher earnings for all racial/ethnic
groups as well as for men and women. The data indicates that higher levels of education
lead to higher earnings and higher tax revenues for federal, state and local governments
(College Board, 2005, p.9).

Increased tax revenues were also cited as an economic benefit of obtaining a
The Institute perceived the relationship between higher education for the individual as
interconnected in the economic and social benefits for both the individual and society
(Pasque, Hendricks, & Bowman, 2006, p. 16).

Although several studies highlight the benefits of a postsecondary education, the
student and those supporting him/her must determine the importance within their own
reported the comprehensive findings from two national surveys. Most adults surveyed
believe that in order to succeed in the world today a young person needs a college
education. But in the public’s view there are other attributes that are more important. Six
in ten (61%) adults say a good work ethic is extremely important in helping a young person succeed in the world today. Nearly as many (57%) say knowing how to get along with people is extremely important (Pew Social Research Staff, 2011).

Distinguishing the importance of college attendance from a good work ethic and getting along with others assumes that they are separate pathways. According to Alexander Astin the growth and development of students is a central goal of higher education (Astin, 1999). Among college graduates surveyed 74 percent said that college was very helpful in increasing knowledge and growing intellectually and 69 percent said that it was very useful in helping them grow and mature as a person (Taylor et al., 2011, p. 15).

Pascarella and Terenzini acknowledge that cognitive development, critical thinking and moral reasoning are developmentally based which means that students mature and change as a result of getting older, not necessarily as a result of attending college. However, college students make greater changes on a broad range of outcomes than similar individuals whose formal education ends with secondary school. These include (a) verbal and quantitative skills, (b) oral and written communication, (c) critical thinking, (d) reflective judgment, (e) intellectual flexibility, (f) principled reasoning in judging moral issues, (g) value placed on aesthetic and intellectual matters, (h) social and political liberalism, (i) acceptance of nontraditional gender roles, (j) intellectual orientation, (k) internal locus of control, and (l) a series of habits that enhance continued learning (e.g., reading, continuing education, and participation in cultural events). College facilitates a broad range of desirable changes that don't occur to the same extent to similar individuals who don't attend college (Pascarella & Terenzini, 1995, p. 2).
A number of studies have shown a high correlation between higher education, cultural and family values, and economic growth, yet; only one-quarter of the US adult population has at least a bachelor’s degree. According to Tinto (1982) college persistence to degree is influenced by a student’s first year experience. The inability to adapt to the new environment often causes students to withdraw from school during or after the first year.

Studies highlighting the barriers to student success in college and the influence on this research are reviewed in the following section.

**Persistence and barriers to completion**

A significant problem facing undergraduate institutions of higher education is the high attrition rate among students. According to Vincent Tinto student goal commitment and institutional commitment are important factors in student departure. A study conducted by Bowen, Chingos, and Mcpherson (2009) tracked the graduation rates of students who entered 21 flagship universities in 1999. They found that 65 percent of students at the most selective private colleges and 54 percent at the most selective state systems graduated in four years. The less selective private and state colleges had a four-year graduation rate below 35 percent. There were also significant gaps among male students compared to female students. Within the category of males, black students had the lowest graduation rate of 26 percent in four years.

A significant finding from the study is the impact of individual institutions on persistence (p.236). The research revealed that nearly half of all withdrawals from college occur after the second year, prompting the researchers to caution institutions that addressing transition problems of students is not enough to prevent departure from
college after the first or second year. This finding supports Vincent Tinto’s analysis that “events within the institution come to shape the process of departure” (p. 221).

Student engagement in college is especially critical for low-income and underserved populations. Access to and participation in postsecondary education have increased, yet; African Americans and Hispanics are less likely to attend and complete college than are Caucasian students (Lotkowski, Robbins, & Noeth, 2004, p. 2).

In 2006 the National Center for Education Statistics conducted a study of 4-year colleges and universities comparing graduation rates with respect to college selectivity and low-income enrollment. In identifying institutions as low-income serving, the NCES study defined low-income based on the proportion of Pell Grant recipients in their total undergraduate population. Low-income serving institutions with graduation rates in the top 10 percent of their selectivity group were compared with other low-income serving institutions with respect to institutional characteristics such as sector, enrollment size, and minority enrollment. The study identifies institutions that serve large low-income undergraduate populations, and compares those with relatively high graduation rates with other low-income serving institutions. (Ham & Carroll, 2006)

When comparing moderately selective institutions the study found that colleges with small low-income enrollment had a 6-year graduation rate of 69 percent. Colleges with a large low-income enrollment had a 44 percent 6-year graduation rate.

The results indicate that graduation rates are inversely related to the size of low-income student population (Ham & Carroll, 2006). The findings indicate that when comparing institutions there are gaps in graduation rates between white students and black or Hispanic students. However, the graduation rate gaps were narrowest in
institutions, such as historically black colleges, where either low-income black or Hispanic students were most highly represented.

Indications from the cited studies are that there is a lower percentage of student retention in institutions where there are a higher percentage of low-income students. The gap in the graduation rate between white and black and Hispanic students narrowed when comparing students in highly selective institutions with high low-income enrollment.

Vincent Tinto responds to the data from the NCES study commenting that access to higher education for low-income students has increased, and gaps to access between high and low-income students decreased, yet; the gap between the well-to-do and poor students in four-year college completion remains the same (Tinto, 2006-2007). Tinto also questions research that combines low-income with students of color when the two issues are different. While the access to higher education has increased for low-income students the research needs to address the low persistence rate and focus on the nature of students’ experiences in two and four year institutions. Tinto stresses the importance of knowing how the experiences of low-income students impact persistence and more importantly how institutions enhance their success in higher education. The commitment of the college or university to student success for low income and underrepresented students will influence persistence by shaping students’ sense of belonging (Tinto, 2005, p. 12).

The role of the institution in enhancing student success for African-American students is the focus of a study by Ernest Pascarella and Patrick Terenzini and an example of the importance of the institution’s role in persistence. The qualitative study of 88 African American undergraduate students attending historically black colleges
found that the students perceive lower levels of stress, isolation, and racism on campus than their counterparts at predominantly white institutions. The study also found that African-American students at historically black colleges are more likely than the white students to persist and obtain the bachelor's degree (Guiffrida, 2005). According to Vincent Tinto’s theory of student departure, college attrition can be attributed largely to a lack of fit between the student and the institution (Tinto, 1993). Tinto maintains that college students who perceive their norms, values and ideas as congruent with those at the center of the institution, are more likely to become academically integrated into the college (Tinto, 2006-2007, p.10).

A study conducted by the ACT Policy Institute, The Role of Academic and Non-academic Factors in Improving College Retention, analyzed the critical issues affecting persistence in college. The findings indicate that non-academic factors of academic-related skills, academic self-confidence, academic goals, institutional commitment, social support, institutional selectivity and financial support, and social involvement all had a positive relationship with retention (Lotkowski, Robbins, & Noeth, 2004, p. vii). The purpose of the ACT study was to determine which factors had the greatest impact on college retention. When separating academic from non-academic factors, the researchers found that academic-related skills, academic self-confidence and academic goals were strong indicators in predicting college retention. When measuring the strength of the combined academic and non-academic factors, they found that the strongest relationship to retention was: high school GPA, ACT assessment scores, institutional commitment, academic goals, social support, academic self-confidence and social involvement (Lotkowski, Robbins, & Noeth, 2004, p. 7).
A study by Demaris and Kritsonis (2008) support the ACT report finding that institutional commitment is a strong indicator of college retention. The study explores the effects of the college classroom on student persistence and satisfaction. The authors focus on the classroom as the hub of academic and social integration and purport that there is a critical linkage between student involvement in classrooms, student learning and student persistence (p. 3).

In a paper presented at an international conference, Vincent Tinto promotes student retention through classroom practice and discusses the five conditions within institutional control that would promote persistence. The conditions are expectations, support, feedback, involvement and learning (Tinto, 2003). Tinto discusses institutional expectations of students and states that, “Students, especially those who have been historically excluded from higher education, are affected by the campus expectation climate and by their perceptions of the expectations of faculty and staff hold for their individual performance” (Tinto, 2003, p. 2). In reviewing the five conditions needed for persistence, Tinto shares data from a longitudinal study comparing the experiences of students in classrooms that have adopted these practices to students involved in more traditional lecture classrooms. The findings indicate that students in the innovative classroom settings were more involved on all measures of student effort and saw themselves as having made greater intellectual gain. The researchers also found that students in the innovative program had a higher retention rate than did students in the lecture classrooms (Tinto, 2003, p. 5).

Institutional commitment to student engagement is enhanced through partnership collaboration between high schools and colleges. An early start in high school gives
students an opportunity to experience college by taking college courses and interacting on a college campus. The next section will highlight the dual enrollment program and the research that supports the program’s impact on college retention.

**Dual enrollment programs that positively influence retention**

The research reviewed investigates the influence of the high school dual enrollment program on student performance and retention beyond the first year in college. The purpose of the review of studies is to describe the evidence that supports dual enrollment having a statistically significant influence on college performance. A report issued by the US Department of Education in 2005 found that more than half of all colleges and universities in the nation enrolled high school students in courses for college credit. (Karp, Bailey, Hughes, & Fermin, 2005). This section reviews the research and methods used to determine if exposure to college through dual enrollment affects college transition and performance.

A general description of a dual enrollment program is one that allows high school sophomores, juniors and seniors who meet eligibility standards, determined by individual states, to enroll in college courses and earn college credits while still in high school. Data collected by the US Department of Education, Office of Vocational and Adolescent Education, indicates that dual enrollment policies exist in 40 states in the United States. (Karp, Bailey, Hughes, & Fermin, 2005). Many states, such as, Colorado and Florida, pay the tuition for one dual enrollment course per semester. Others, like Iowa and Kansas, require the student to pay.

Dual enrollment is a program that has been existence at least since 1976. Christine Mokher and Michael McLendon conducted an event history analysis of state
adoption of dual enrollment policies to determine if there was a direct relationship to adoption of dual enrollment policy and state characteristics (Mokher & McLendon, 2009). They also sought to determine if “conventional theories on policy adoption explain the rise of dual enrollment” (Mokher & McLendon, 2009, p. 249). The authors used the time frame from 1976, the year that California adopted dual enrollment, to 2005 when all but seventeen states had adopted a dual enrollment program. The findings from the event history analysis identified several influences on state dual enrollment policies (Mokher & McLendon, 2009, pp. 258-260). The study is important because it gives a progressive fourteen-year view of state policy adoption as it relates to dual enrollment, giving context in history to its evolution.

The impact of the adopted dual enrollment policies by the states is compiled in an in-depth report emanating from a national survey of postsecondary institutions. The report produced by the National Center for Education Statistics found that approximately 800,000 high school students in the United States took college level courses through postsecondary institutions between 2002-2003 (Kleiner & Lewis, 2005). The purpose of the study was to provide states, higher education institutions and high schools with information on the extensiveness and highlights of dual enrollment programs, especially those reflecting the needs of students at risk of educational failure.

Trends in state policy implementation are reviewed in the 2008 report On Ramp to College: A State Policymakers’ Guide to Dual Enrollment, published by Jobs for the Future (Hoffman, Vargas, & Santos, 2008). The guide answers the question posed in the NCES survey regarding programs for underrepresented students in higher education. The report cites “participation data on dual enrollment programs in cutting edge states,”
The states are recognized because their policy goals and dual enrollment programs seek to improve access for all students. The authors describe dual enrollment as an “on ramp” to postsecondary education for students who ordinarily would not be considered college-bound.

Eligibility standards for dual enrollment students’ centers on students who have a minimum high school GPA of 3.0, pass the college placement test in English and math, and are recommended by the sending high school. Students in career and technical high schools, like the high school that is the focus of this study, traditionally have not been included in dual enrollment selection. The research on the success of the Career and Technical Education (CTE) students taking dual enrollment courses is reported in *The Postsecondary Achievement of Participants in Dual Enrollment: An Analysis of Student Outcomes in Two States*, an extensive study by Melinda Karp, Juan Calcagno, Katharine Hughes, Dong Jeong and Thomas Bailey (2007). When researching their October, 2007 study, Karp et. al selected Florida and New York as states to study. Both states had well-established dual enrollment programs, large population of students, Career and Technical Education (CTE) students involved in dual enrollment and datasets that included high school and college outcomes. Florida’s dataset had records for all students, 299,685, enrolled in Florida’s public high schools. New York’s data, 2303 records, concentrated on students who attended “one of the City’s 19 vocational schools and who enrolled in CUNY after graduation” (p. 17). Karp et.al. proceeded by analyzing each of the datasets. In New York they focused only on CTE students. In Florida they had so much data that they were able to analyze two strands: 1) the CTE group who participated in dual enrollment and a CTE group who were non-participants and 2) all dual enrollment
participants and non-dual enrollment students. The researchers did two analyses of the data, a descriptive analysis and an impact analysis. In using the descriptive analysis the researchers examined the types of students who enrolled in dual enrollment compared to those who did not enroll based on demographics and academic characteristics. They then compared the students in terms of educational outcomes such as high school graduation, college enrollment, and intensity of college attendance.

The authors looked at the Florida data and extracted the variables that would be indicators of outcomes related to dual enrollment. They selected: high school diploma, postsecondary enrollment, full-time enrollment, state university system enrollment, first year GPA (right after high school through year one in college), second year GPA (two years after high school), cumulative postsecondary GPA, persistence to second term, persistence to second year.

Karp, et. al. found that when looking at all dual enrollment vs. non-dual students, the characteristics of dual enrollment students were more likely female and white non-Hispanic and less likely black or Hispanic. When they looked at the CTE students they found that those who were in dual enrollment programs were more advantaged than their non-dual enrollment peers. This was based on the independent variable free and reduced lunch and household income. The CTE students were also more likely to be female and white (Karp M., Calcagno, Hughes, Jeong, & Bailey, 2007). In reviewing the data, the researchers conclude that the outcomes show: dual enrollment is related to a students’ likelihood of earning a high school diploma, participation in dual enrollment is positively related to enrollment in college for both the CTE and non-CTE dual groups, dual enrollment students are statistically significantly more likely to persist
in college to a second semester, and dual enrollment is positively related to students’ long-term postsecondary outcomes (Karp M., Calcagno, Hughes, Jeong, & Bailey, 2007).

The study by Karp et. al. informs the research for this thesis in the finding that students who participate in dual enrollment are more likely to persist in college to second semester. The Karp et.al. study is also significant in that the predominant population of CTE students taking dual enrollment is white and female. This finding is in contrast to the population of students taking dual enrollment at the career and technical school, the site of this study. The dual enrollment students enrolled in the career and technical school are a multi-cultural, socio-economic mix of males and females, which “expands the outreach to underserved populations,” as suggested by Karp et.al (p. 69).

Two-thirds of the students at the career and technical high school are considered low-income based on the federal lunch data. A mixed-methods study exploring the reasons for 220 low-income high school students in Nebraska selecting to participate in a state funded dual enrollment program called Access College Early (ACE) and the effect of the dual enrollment (DE) program on enrolling in college was conducted by Carna Pfiel. The quantitative study was guided by two research questions: 1) Is there a significant difference between the college-going rate of low income high school students who received ACE scholarships and those who did not receive the scholarships? (2) What factors contributed to low-income students’ in the ACE program subsequent enrollment in higher education after completing a dual enrollment course? (Pfeil, 2009). Pfiel tested six hypotheses in the quantitative portion of the study. The significance for this research is the comparison of Pfiel’s findings to Karp et.al. There was a similarity
between what she tested for and the findings of Karp et.al. Pfiel hypothesizes that the number of dual enrollment courses taken is not significantly related to ACE students enrolling in college. Karp found that the independent variable of number of dual courses did not significantly impact how students did in their first three semesters of college. Pfiel hypothesized that gender was not significant in relation to ACE students enrolling in college, whereas Karp et.al. found that a high percentage of dual enrollment students were female who were enrolled in college.

The findings from the open-ended interview questions in the qualitative portion of Pfiel’s study are significant in reflecting the themes of this research study which are: student support by teachers and counselors, student encouragement by families and friends, financial implications of dual enrollment and college persistence, and student motivation.

The qualitative study revealed that: 1) Dual enrollment was viewed as an opportunity where students could save money and have a head start (2) Family, friends and extended family were sources of encouragement (3) Dual enrollment encouraged enrollment in college (4) Scholarships were critical (5) Teachers and counselors were instrumental in supporting students (6) Participants expressed strong self-motivation and inner drive.

The researchers found that all students involved in the study were positive about their dual enrollment experiences. Those who actually took their courses on the college campus had a greater sense of independence and satisfaction with the program. Students, who participated in the dual courses on the high school campus, felt it was another high school course. The researchers suggest that more research on climate in dual-enrolled
classes is needed.

Alexander Astin and Vincent Tinto theorize that a student’s pre-college experience impacts his/her transition to college. Students at the career and technical high school enrolled in dual enrollment have the opportunity to experience taking classes on a college campus, meeting with professors and socializing with college students. According to Tinto, students begin their college careers with pre-college experiences and attributes. The experiences that the students bring to college influences their educational goals and commitments.

Studies that focus on dual enrollment and persistence to the second semester of sophomore year are important in determining if there is support for this research. Earlier studies by Bailey, Hughes and Karp (Bailey, Hughes, & Karp, 2002) on easing transition from high school to postsecondary institutions, are referenced by Jermaine Williams in her dissertation, *Early College Academic Performance: Studying the Effects of Earning College Credits from Advanced Placement and Dual Enrollment* (Williams, 2010). In a 2010 quantitative study on early college academic performance, Jermaine Williams studies the effects of earning college credits from Advanced Placement and Dual Enrollment. Williams’ study expands on Karp et.al by including AP students. Karp et.al. use data from the State of Florida and specific populations in New York. Williams’ study focuses on one institution. Williams uses three cohorts based on the research questions: 1) Does earning college credits from AP and DE courses affect first and second year retention? (2) Does earning college credits prior to college affect early academic achievement? (3) Does earning college credit in high school through AP or DE experiences impact college GPA during the first three semesters? Her cohorts were: 1)
students entering college with only AP credits (2) Students entering with only DE credits (3) Students entering with no college credits.

The comparison of Williams’ study, which found that participation in a high school dual enrollment or AP program did not have a statistically significant impact on college semester retention, differs from the findings of Karp et.al. which found that dual enrollment makes a positive difference in college retention.

Williams’ findings inform this research in what it did not include. Neither study discussed the non-academic factors: academic self-confidence, academic goals, institutional commitment, social support, institutional selectivity and financial support, and social involvement which all had a positive relationship to retention in the ACT study (Lotkowski, Robbins, & Noeth, 2004, p. vii). In discussing the delimitations and limitations of her research, Williams points out that the study is focused on one institution and the entering students are from a single fall class. She also notes that the study does not intend to assess the effects dual enrollment and AP course participation have on the social transition to college. Williams’ discussion of the limitations of the study suggests that incorporating qualitative research will “provide a comprehensive view of the stories of the students in the cohorts researched” (Williams, 2010, p.106).

The recommendation by Williams that qualitative research should be incorporated into future studies along with the suggestion by Karp et. al that future research should use additional control variables for student background and motivation (p. 71 ), reinforces the importance of this qualitative study.

In determining the extent to which dual enrollment and high school academic advising has an impact on persistence to the second semester of sophomore year, the
researcher interviewed college students who are graduates of the career and technical high school. A study by Joni L. Swanson on the implementation of dual enrollment policies is analyzed in *An Analysis of the Impact of High School Dual Enrollment Course Participation on Post-Secondary Academic Success, Persistence, and Degree Completion* (Swanson, 2008). Utilizing data from the National Education Longitudinal Study of 1988/2000 (NELS: 88/2000) Swanson evaluated the impact of dual enrollment programs upon student persistence and degree attainment. Under the umbrella of Tinto’s Theory of Institutional Departure and Merton’s Theory of Anticipatory Socialization, Swanson also researched the possible effects of socializing in a college environment while in high school and the impact on student confidence. Utilizing inferential statistics, the data reveal:

Dual enrollment participation may play a significant role in persistence to degree, especially for students who entered college following high school, those who acquired 20 or more college credits by the end of the first year of college, and those who continued their enrollment in post-secondary education without a break of more than one semester through the second year of college (Swanson, 2008, p.3). Swanson’s investigation into the impact of socializing on campus prior to enrolling in college, suggests that students who have a positive dual enrollment experience may have an added degree of confidence in their ability to handle college level work (Swanson, 2008).

Randy Mead reinforces the impact of dual enrollment on transition to college and retention in a study comparing the enrollment and academic success of dual credit and non-dual credit students at a DesMoines Area Community College. The 2009 study
references Karp, Calcagno, Hughes, Jeong and Bailey throughout the writing. Mead incorporates the theories of Tinto and Pascarella and Terenzini in his study when discussing the impact of transition to college and early leaving.

Mead’s findings that there was a significant difference when comparing the academic success of the non-credit and dual credit students supports earlier research which lends credibility to this study.

The studies reviewed focus on state dual enrollment policies, examples of policy implementation, and in-depth studies of dual enrollment programs. The significance of this qualitative case study in relation to the reviewed studies is the addition of the advising support as a factor influencing college persistence for dual enrollment students. The research that exists on the impact of high school/college faculty advising on college persistence and retention

Ernest Pascarella and Patrick Terenzini support the foundation for the research thesis, which is the influence of dual enrollment and high school advising on student persistence in college. They suggest that, regardless of institutional type or the composition of the student body, solid academic advising can influence student persistence (Pascarella & Terenzini, 1977, p. 542). According to Pascarella and Terenzini students who are the happiest and academically the most successful have developed a solid relationship with an academic advisor, a faculty member, or an administrator who can help them. The focus of their research was college advising and the impact of advising on college students (Pascarella & Terenzini, 1978).

Pascarella and Terenzini conducted a longitudinal study of 1,008 randomly selected freshmen at Syracuse University in 1975. The study investigated the
relationship between student-faculty informal relationships and three freshmen educational outcomes. The study controlled for 14 pre-enrollment characteristics and focused on the frequency and quality of student-faculty informal relationships. The researchers reported significant increases in the variance in freshman year academic performance and self-perceived intellectual and personal development (Pascarella & Terenzini, 2001, p. 183).

Research on the impact of the high school faculty advisor relationship on student confidence is limited, but the findings by Wilson, Wood and Gaff may be applied to the high school setting. A study by Wilson, Wood and Gaff explored the relationship between student learning and teacher behavior. The multi-institutional study asked faculty members and students to identify faculty members whom they regarded as having a significant positive impact on students. The characteristics most identified as traits of an effective teacher were: the use of analogies when presenting information, efforts to make courses interesting and level of accessibility to students outside the classroom (Pascarella & Terenzini, 1991, p. 97). Findings by Wilson et. al suggest that “faculty who are frequently sought out by students outside the classroom appear to provide clear cues to their accessibility in the classroom” (p.75). According to Wilson et. al early positive interactions with faculty may influence a student’s confidence to approach faculty in the future (Pascarella, 2001, p. 188).

Studies on the application of Pascarella and Teranzini’s theory to high school advising of students are limited. One study published in the National Academic Advising Association Journal highlights Early College High Schools, a model that is designed to incorporate the dual enrollment concept within a small high school. Early college high
schools (ECHS) are partnerships between high schools and colleges or universities designed to enhance college readiness and completion, particularly among students traditionally underrepresented in higher education (Oliver, Richard, Witt, Alvarado, & Hill, 2010, p. 14).

The study, *Creating College Advising Connections: Comparing Motivational Beliefs of Early College High School Students to Traditional First-Year University Students*, explores the similarities and differences between Early College High School Students and university freshmen in areas of: academic motivation, coping ability and student background information (Oliver, Ricard, Witt, Alvarado, & Hill, 2010). Utilizing advisor and counselor reports, the authors address the implications for creating advising connections and the impact on ECHS students. The researchers surveyed 103 ECHS students in grades 9 and 10 and 838 college freshmen using the College Student Inventory (CSI). The intent of the study was to determine which CSI profiles of ECHS students match those of first-year university students.

The findings indicate that college freshmen accessed support personnel on the college campus more readily than the ECHS students taking college courses. The freshmen were also better informed about college and university culture, and the course selection process.

The researchers suggest that the results may benefit high school advisors and college partners in meeting the immediate programming and advisory needs of students during their earliest exposure to the university environment. The results of this study support the findings of this researcher that the high school advising support of dual
enrollment students in conjunction with the college partnership addresses the program
needs of students during their early exposure, dual enrollment, to college.

Conclusion

The discussion of college retention has been a topic of concern among educators
for the past forty years. In 2009 President Barack Obama introduced the American
Graduation Initiative proposing that by 2020 the “nation will once again have the highest
proportion of college graduates in the world” (Jaschik, 2009, p. 1). This goal will require
raising the percentage of Americans ages 25 to 64 with a college degree from 41.2 % to
nearly 60.0% (The Pell Institute, 2011).

The literature review explored the topic of college retention and the importance of
college persistence and retention in the United States. Studies conducted by the Council
On Competitiveness, 2007, the National Center For Educational Statistics, 2010, and The
College Board Trends Report, 2009 support the works of Tinto, Astin and others that
college completion has an impact on society and one’s quality of life.

An exploration of the influencing factors that thwart college persistence led to
comprehensive studies by ACT, and NCES. The ACT study found that the combined
academic and non-academic factors having the greatest influence on college retention
were: high school GPA, ACT assessment scores, institutional commitment, academic
goals, social support, academic self-confidence and social involvement. Socio-economic
background was the prevalent indicator in the NCES study.

The literature reveals evidence of the dual enrollment program as having a
positive influence on overcoming barriers and improving college persistence. However,
the literature is limited regarding the relationship between dual enrollment programs and
the influence of high school faculty advising on retention.

CHAPTER III  RESEARCH DESIGN AND METHODOLOGY

The research design for this thesis is a descriptive, single case study that was
guided by a qualitative method of inquiry. The case study is designed to incorporate the
following components: 1) research questions (2) the study’s theoretical propositions (3)
the study’s unit of analysis (4) logic linking the data to the propositions and (5) the
criteria for interpreting the findings, recommended by Yin (2003, p. 21). Yin describes
the research design as a “logical model of proof” (p. 21).

The research questions guided the case study and the choice of which case to
study. The data collected, analysis of the data, findings and conclusions link back to the
questions and perception that the dual enrollment partnership and the high school faculty
advisor-student relationship, influences student persistence to the second semester of
sophomore year in college.

Research Questions

The research for this study described the process by which the high
school/community college dual enrollment partnership and high school faculty advisor
program supports college retention. The research questions are designed to address
student support and how the partnership and advisor program are perceived to improve
persistence.

The research question that is primary in the investigation is: How are dual
enrollment partnerships with support from high school faculty advisors perceived to
affect college retention for enrolled students? A secondary question to support this is: How do former dual enrollment students enrolled in the sophomore year of college perceive the support they received from high school / college advisors?

The research gathered from the study documents the perceptions of the connection between student-faculty relationships in a high school /college partnership and how the support gained from the relationship adds to student persistence to the second semester of the sophomore year in college. The students are those considered underserved who are given an opportunity to take dual enrollment classes while in high school.

**Methodology**

The qualitative, descriptive single case study is the approach used in this doctoral thesis. The qualitative method was selected in order to explore the process by which the career and technical high school in partnership with the community college collaborated to support student persistence in college. The qualitative data that emerged as a result of interviews with advisors and college students, observation of high school advisor groups and dual enrollment credit data reflects the characteristics of qualitative research as outlined by Creswell (Creswell, 2009, p. 175). Tinto stressed the importance of including qualitative research methods in the study of student retention. He stated that the "effective assessment of retention also requires the use of a variety of qualitative methods ranging from focus-group interviews to qualitative interview techniques to explore student perceptions of their experiences on campus" (Tinto, 1994, p. 217).

Qualitative research is a situated activity that locates the observer in the world. Qualitative research involves an interpretive, naturalistic approach to the world. This
means that qualitative researchers study things in their natural setting attempting to make sense of or interpret phenomena in terms of the meanings people bring to them (Guba & Lincoln, 2005). Data for this case study was collected in the natural setting, the site of the problem being investigated. The site is an urban career and technical high school and a public community college.

**Case Study**

Case studies can be used for descriptive, explanatory, or exploratory purposes (Yin, 1993). For any of these purposes, there are two distinct case study designs: single-case study design and multiple-case study design. Single-case studies are an examination of one individual or group. This study was conceptualized as a single-case study. The focus of the study is on the high school advising process in the dual enrollment program, which includes the experiences and perceptions of both advisors and students at a career and technical high school. Yin specifies that case studies are the preferred strategy when how or why questions are being posed, when the investigator has little control over events and when the focus is on contemporary phenomenon within some real-life context (Yin, 2003).

According to Yin one rationale for a single-case is when it represents the critical case in testing a well-formulated theory (Yin, 2003, p. 40). The overarching theory on which the project is based is Vincent Tinto’s theory of student departure, which describes the process of student withdrawal based on lack of mechanisms for continued student support. Tinto’s theory of student departure is supported by Alexander Astin’s theory on student integration and the impact of student-faculty interaction on departure. Ernest Pascarella and Patrick Terenzini’s considerable research on student-faculty interaction
lends further support to the study of student persistence in college.

The case study described the connection between a high school/college dual enrollment partnership with high school advisor support to the persistence of the career and technical high school dual enrollment students in the second semester of the sophomore year in college. The study is both a process of inquiry about the case and the product of that inquiry (Stake, 2005, p. 444). The research questions: how are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? How do former dual enrollment students enrolled in the sophomore year of college perceive the support they received from high school advisors? guided the exploration. For the research community, case study optimizes understanding by pursuing scholarly research questions (Stake, 2005).

The pursuit of scholarly research utilizing a qualitative approach is supported through the use of documents, archival records, interviews, direct observation, participant observation and physical artifacts (Yin 2003). The case study research for this project utilized data collected from interviews, observations of advisor group activities, and records related to dual enrollment participation.

The case study methodology advanced the understanding of the stated practical goal through the exploration of the research questions. The single case study focuses on the primary unit of analysis, which is the faculty advisor program, and the impact of the support from the advisor on college persistence.

Site and Participants

The site of the study is a career and technical urban high school in the Northeast. The participants in this purposeful sampling are seven high school faculty advisors, four
critical friends having extensive knowledge about the school and program, and seven former career and technical high school students who were enrolled in the dual enrollment program while in high school. Also participating through observation were three advisor groups with five dual enrollment students in their junior and senior year.

The advisor group is the center of the school’s organizational structure. The faculty advisor remains with the same group of 15 students for four years, managing each student’s personal learning plan and internship placement. The structure of the faculty advisor program lends itself to faculty-student interaction supported by Astin, Pascarella and Tinto.

The selection of faculty advisors, and former students affiliated with the career and technical high school helped develop an understanding of the problem of practice in this purposeful qualitative sampling.

The research participants included seven faculty advisors having three or more years of experience in the high school. The faculty advisors stay with students for a four-year loop, thus they would have had an opportunity to interact with dual enrollment students for at least three years.

Seven dual enrollment students who are enrolled in sophomore year in college were interviewed regarding their perceptions of the advising support they received while in the dual enrollment program and the impact of the advising on their college experience. The criteria for selection of the seven students were: dual enrollment participation, transfer of at least six college credits, and willingness to participate in the study.
The three advisor groups selected for observation had juniors and seniors participating in a dual enrollment class.

Prior to embarking on the study, the researcher was not involved with the career and technical high school or the study participants. The research topic interested the school administrators and faculty allowing the researcher access to the school and the participants. The researcher is not an employee of the school.

**Program Logic Model**

A program logic model (Figure 6) was designed to reflect the research question: How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? and describe how the faculty advisor and dual enrollment program, and Activities associated with the program would progress to the Intermediate Outcomes, which is college persistence to the second semester of the sophomore year in college.
Figure 4  Logic Model of the Faculty Advisor and High School/Community College Partnership Program and Intended Outcomes

**Problem Statement:**
College student retention in the USA is declining
- Impacts global economic competitiveness
- College degree equates to higher wages & lower unemployment

**Program Goal:**
The faculty - student advisor program & dual enrollment partnership will increase student retention in college for underserved populations.

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**Logic Model of the Faculty-Advisor and High School Community College Partnership Program and Intended Outcomes** adapted from www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html

The program logic model is a picture of how the program works. This model provides a roadmap of the program, highlighting how it is expected to work, what activities need to come before others and how desired outcomes are achieved (W.K. Kellogg Foundation, 2004). It helps keep a balanced focus on the big picture as well as
the component parts. Yin (2009) states, “as an analytic technique, the logic model consists of matching empirically observed events to theoretically predicted events” (p. 149). The program logic model provides a clear organizational framework for developing the case study protocol, for comparing the dual enrollment credit data with interview findings and advisor group observations.

**Theoretical Model**

The researcher used the theoretical lens of Vincent Tinto, Alexander Astin, Ernest Pascarella and Patrick Terenzini as a guide in collecting and analyzing the data. The research analysis incorporated the theories by showing the perceptions of students’ pre-college experience on persistence to the second semester of the sophomore year in college. The theories are represented in a model (Figure 5) showing the application of the theories to the research.
Figure 5  Logic Model Utilizing the Theories of Tinto, Astin, Pascarella and Teranzini in the Research Thesis

The Input is the dual enrollment courses and faculty advisor support, which reflect the pre-college experiences underlying Tinto’s (1993) and Astin’s (1997) theories that positive student pre-entry attributes lead to greater student integration and thus persistence. The Effect is a result of the pre-college attributes that lead to commitment to goals. Student motivation, dual enrollment credits and a faculty advisor support model impact the Effect. Student goal commitment is balanced by institutional commitment influenced by the high school/college dual enrollment partnership, which bridges the student transition to college. Tinto asserts that it is the responsibility of the college or
university to promote student persistence (Tinto, 2003, p. 2). The Output is academic, social and personal development. Dual enrollment students have experienced the support from faculty advisors during their four-years of high school. According to D.S. Crockett, academic advising is a developmental process that assists students in the clarification of their life/career goals and in the development of educational plans for the realization of these goals (Frost, 1991, p. 3). The academic and social systems are the result generated by student goal and institutional commitment. Students are more likely to persist and graduate in settings that foster learning (Tinto, 2000). Learning has always been the key to student retention. Students who learn are students who stay. Institutions that are successful in building settings that educate their students are successful in retaining their students (Tinto, 2003, p. 3). According to Alexander Astin the amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program (Astin, 1999).

The Intermediate Outcomes are academic and social integration that are important to retention efforts. (Tinto, 1993). Students are academically and socially integrated when they have positive regard for their academic performance and they value the social relationships they have established at the institution. Tinto (1975) articulated a model of college student persistence/withdrawal based on these variables, and Pascarella and Terenzini (1983) generated scales to measure them. Alexander Astin (1977, 1993) determined that the persistence or retention rate of students is greatly affected by the level and quality of their interactions with peers as well as faculty. The Ultimate Outcome is the completion of college. According to Tinto, Astin, Pascarella and
Teranzini, there should be a higher percentage of students completing college if they experience academic and social integration (Pascarella and Teranzini, 1977; Astin, 1975; Tinto, 1993).

The theoretical logic model provides a visual representation of how the foundational theory is directly related to the program services and eventually to outcomes. The relationship of the theoretical model to the research questions is centered on the pre-college experiences of the students from the career and technical high school. A program logic model (Figure 6) identifies the problem, problem statement, which is the focus of the study and defines the program goal that will address the problem.

The model is used to demonstrate how, during the course of four years, the faculty/advisor program and the high school/community college partnership – Resources- engages students in activities that lead to the development of a supportive faculty-student relationship, and dual enrollment college experience, Output. The short-term outcomes for the dual enrollment students are an easier transition to college, and a connection with college faculty. The intermediate outcomes are a relationship with faculty and college persistence to the second semester of sophomore year. The long-term outcome is a college degree. The theoretical logic model in Figure 5 enhances the Logic Model in Figure 6 by illustrating the goal commitments that form as a result of the pre-college attributes, which lead to academic and social integration.
Data Collection

The case study is distinguished from other research methods in how the site is selected, how the data are collected and how they are analyzed. The multiple sources of evidence to support the case study research in a qualitative study are identified by Yin (2009) as: documentation, archival records, interviews, direct observation, participant observation and artifacts. According to Yin (2003) “if data collection is not done well, the entire study investigation can be jeopardized, and all of the earlier work- in defining the research questions and designing the case study- will have been for naught” (p. 57). Data for this study were collected after receiving IRB approval and included document review, interviews and observations. The procedures for collecting the data are illustrated in Figure 6.
According to Yin (2009), “for case studies, the most important use of documents is to corroborate and augment evidence from other sources” (p. 103). The dual enrollment director provided documentation needed to augment evidence from the interviews and observations. She provided a list of students who participate in dual enrollment and are in the advisor groups of the advisors being interviewed. The researcher focused on dual enrollment students when observing advisors conduct the student one-on-one discussion. The list included the college credits earned through dual enrollment.

A second list of historical data included the dual enrollment courses, grades and credits for the Classes of 2008, 2009 and 2010. Student names were not included on the list. The purpose of obtaining the college credit report was to look for the connection.
between dual enrollment and college retention as documented in the study by Karp, Calcagno, Hughes, Jeong, and Bailey (2007) and triangulate the data with data from the observations and interviews. Another reason to collect the college credits earned is the non-traditional format of the career and technical high school. The students do not take traditional courses nor do they receive grades. It is only when they attend a dual enrollment class that they must change their approach to studying and focus on grades and credits. During the interviews the researcher noted that despite not having had previous high school experience using textbooks and taking lecture notes, approximately ninety percent of students in dual enrollment classes during the years 2008, 2009 and 2010 were successful in achieving college credits. The question posed to faculty advisors and college students was, “To what do you attribute their success in the courses?” The objective was to utilize the credit data to support the findings from the interviews and advisor group observations.

Patton (2002) notes, “we interview people to find out from them those things we cannot directly observe” (p. 340). Seidman (2006) proposes that the purpose of in-depth interviewing is an interest in understanding the lived experience of other people and the meaning they make of that experience. As one of six sources for collecting case study evidence, Yin (2009) describes the interview as “one of the most important sources of case study information” (p. 106).

The researcher selected the semi-structured interview based on Michael Quinn Patton’s (2002) description of the basic approaches to interviewing. According to Patton the semi-structured interview involves developing a pre-determined set of questions that are to be explored during an interview. The questions ensure that basically the same
information is obtained from a number of people; yet, there is a great deal of flexibility (p.352). During the course of interviewing the participants, the researcher found that the flexibility of the semi-structured interview allowed for the freedom to pursue certain questions in greater depth without compromising the integrity of the method of inquiry.

There were three populations interviewed for this study. They were the seven faculty advisors, seven former dual enrollment students enrolled in the sophomore year in college and the four critical friends. The interviews with the seven advisors were conducted one-on-one. The goal of the interview was to describe how advisors support dual enrollment students beyond enrolling them in the program. Particular attention focused on the themes of faculty-student relationships, high school/college partnership and college transition.

**Faculty advisor interviews**

The researcher met with faculty advisors following IRB proposal approval. The individual interviews took place in a private space on the career and technical high school campus in order to accommodate the participants. Prior to beginning the interview the participants were given a written explanation of the study and a form to sign acknowledging that they were volunteering (see Appendix A). The participants in the study were advised that the information was collected for use in the research for a doctoral thesis and the anonymity for each participant would be preserved. The researcher stressed that if participants were uncomfortable with the questions, participation could be discontinued at any time. They were assured that they each would be assigned a pseudonym to further protect their identity. Faculty advisors were also
asked if they would give permission for the interview to be digitally recorded. They indicated yes or no on the Informed Consent (Appendix A).

Following the review of the interview process the researcher began the interview. The interviews lasted an average of 60 minutes. Eleven questions guided the semi-structured interview. Six out of the seven participants agreed to be recorded. The recording allowed for a more conversational exchange with the six interviewees, whereas focused transcription limited the free exchange with the other participant. The interviews were transcribed immediately following the interviews. For each interview, a copy of the transcription was sent to the faculty advisor for review and feedback.

The interview questions were designed to reflect the purpose of the case study, which is to examine the influence of dual enrollment and high school advising on student persistence in college. The advisor interview questions are connected to the research question, theorists and initial codes (Appendix C).

The purpose of structuring the interview questions to reflect the theories of Alexander Astin, Ernest Pascarella, Patrick Terenzini and Vincent Tinto was to determine if emerging themes from faculty advisor interviews coincided with Tinto’s theory of student departure, Astin’s theory of social integration and Pascarella and Terranzini’s research on faculty-student relationships. The researcher coded each interview question to reflect the research question and the theories (Appendix C). Miles and Huberman's work (1994) was used as a guide in developing the codes (p.59).

**College student interviews**

Interviews took place with seven college sophomores who are former dual enrollment students at the high school. The community college liaison, a postsecondary
resource counselor, a social media consultant, and the researcher initiated outreach to college students and asked if they would volunteer to be part of the research study. The purpose of interviewing the students was to determine their perceptions of high school advisor support, the perceived impact of that support on their transition to college and to determine the influence of dual enrollment credits on their persistence in college.

The seven college students attended five different colleges. School vacations differed as well as student commitments on and off campus. The researcher was available to the students since there was a small window of opportunity to meet. Six of the students were able to meet face-to-face. One participated by phone.

The locations varied from deli restaurants to the college or high school campus. Selecting tables in a corner achieved privacy in the restaurant space during a time of day when there was less traffic. The spaces on the college campus and the career and technical high school were private.

The interviews took place in late February and March 2012 following IRB approval. Prior to beginning the interview the college sophomores were given a written explanation of the study and a form to sign acknowledging that they were volunteering (Appendix A). The students were advised that the information was collected for use in the research for a doctoral thesis and the anonymity for each participant would be preserved. The researcher stressed that if participants were uncomfortable with the questions, participation could be discontinued at any time. They were assured that they would each be assigned a pseudonym to further protect their identity. The students were not concerned about anonymity and actually preferred to have their names used. The researcher explained that for consistency and their protection they would not be
identified. The students were also asked if they would give permission for the interviews to be digitally recorded. They indicated yes or no on the Informed Consent (Appendix A). All the students agreed to be recorded.

Following the review of the interview process the researcher began the interview. The interviews lasted an average of 50 minutes. Eight questions guided the semi-structured interview. As was the case with the faculty advisors, the interview questions were designed to reflect the purpose of the case study, which is to examine the influence of dual enrollment and high school advising on student persistence in college (Appendix D).

The interviews were transcribed immediately following the interviews. For each interview, a copy of the transcription was sent to the student for review and feedback. Two predominant themes that emerged during the interviews were: the importance of the Learning Plan as a guide to setting goals and time management, and the faculty advisor-student relationship. The learning plan and faculty advisor-student relationship were entered into the computer software code system as an emergent theme.

**Observations**

According to Michael Quinn Patton (2002) there are several advantages to collecting data through observation. Directly observing people in the context in which they interact, gives the researcher a holistic perspective. Second, firsthand experience on the site allows the researcher to draw her own conclusions as a primary observer. Third, the researcher has an opportunity to see things that relate to the research questions that may otherwise go unnoticed. Fourth, the observation gives the researcher a chance to learn things that may not be talked about in an interview.
Data was collected through observation of five dual enrollment students in three advisor groups. The purpose of the observations was to determine if the advisor process supported the information gained from faculty advisor and college student interviews conducted in March 2012. Students met one-on-one with their advisors. The researcher observed the faculty advisor-student interaction in goal planning for the student exhibition. The researcher observed the same students present a 45-minute exhibition followed by questions from their peers and faculty. The researcher transcribed the observations and shared them with the faculty advisors for accuracy in understanding the connection of the Learning Plan to the exhibition.

The researcher followed the guidelines of Michael Quinn Patton (2002,p. 331) when scripting and analyzing notes from the observation. The observation process consists of taking copious, literal notes when observing student–teacher interaction (Saphier, 2008, p. 27). The researcher then reviewed the notes and identified faculty support of students during the observation. The observation focused on the faculty advisor interaction with students and the relationship of this interaction to Astin, Pasquarella, Terenzini and Tinto’s theory of support.

The information obtained through the observations was used to compare data obtained from interviews and documents. Since the faculty advisor is also the lead teacher for the advisees, the purpose of the observation of dual enrollment students in advisor groups was to look at advisor-advisee interactions to determine if the relationship of support is in keeping with Pasquarella’s theory of faculty-student supportive relationships in college persistence.
The data collection procedures for this case study began with gathering existing data that pertains to dual enrollment credits earned by students currently and formally enrolled in the career and technical high school. The second step in the process entailed interviewing the seven faculty advisors, four critical friends and seven graduates of the career and technical high school. The third step was the observation of five dual enrollment students in three advisor groups, each for two sessions.

**Table 1  Research Questions, Data Collection and Analysis**

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data Collection/Timeline</th>
<th>Data Analysis</th>
<th>By Whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How are DE partnerships with support from HS faculty advisors perceived to affect college retention for enrolled students?</td>
<td>a) Observation of the daily operation of the school</td>
<td>a) Emerging themes and patterns as related to the research questions and data collection. Use of MAXQDA to organize common themes and code data.</td>
<td>a) The researcher collected and analyzed the data</td>
</tr>
<tr>
<td></td>
<td>b) Guided, open-ended, face-to-face interview. (March, 2012)</td>
<td>b) Emerging themes and patterns.</td>
<td>b) Researcher</td>
</tr>
<tr>
<td></td>
<td>c) Interviewed faculty advisors who volunteered. (February, 2012)</td>
<td>c) Coding questions for themes.</td>
<td>c) Researcher &amp; DE director</td>
</tr>
<tr>
<td></td>
<td>d) Interviewed critical friends: community college advisor liaison, high school principal, director of the school and the DE coordinator.</td>
<td>d) Emerging themes and patterns.</td>
<td>d) Researcher</td>
</tr>
<tr>
<td></td>
<td>e) Interviewed critical friends: community college advisor liaison, high school principal, director of the school and the DE coordinator.</td>
<td>e) Emerging themes &amp; patterns; triangulation of data.</td>
<td>e) Researcher</td>
</tr>
<tr>
<td></td>
<td>f) Collection of student grades &amp; credits in DE classes (February, 2012)</td>
<td>g) Coding of data.</td>
<td>f) Researcher</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>g) Researcher</td>
</tr>
</tbody>
</table>
2. How do DE students enrolled in sophomore year in college perceive the support they received from high school/college advisors?

a) Guided, open-ended, face-to-face interview with 7 student volunteers (February, March, 2012)
b) High school DE credits

a) Emerging themes and patterns. Coding data. Triangulation of data.
b) Coding data. Triangulation of data
c) Coding data. Triangulation of data

a) Researcher
b) Researcher
c) Researcher

Table 1 connects the data collection and analysis to the research questions. In the process of collecting the data through observations, interviews and dual enrollment credits, the researcher looked for and recorded emerging themes and patterns. Interviews and observations generated 35 codes. Frequency of codes determined major theme categories. Sub codes supported the major themes.

**Data Analysis**

Stake (1995) defined analysis as “taking something apart” (p. 71). Creswell (2009) expands on the definition by describing the process of data analysis as making sense out of text and image data. He likens the analysis to moving deeper into understanding, like “peeling back the layers on an onion” (p. 183). Lincoln and Guba (1985) and Merriam (1988) iterated that during data collection and analysis researchers must negotiate the significance and interpretation of the data with the participants as a goal to reconstruct their realities. Creswell’s (2009) interactive approach to analysis was used to prepare and organize the data for reduction, coding and interpretation.

Case study data analysis involves an iterative, spiraling process that moves from the more general to more specific observations (Creswell, 1998).
Figure 7 Data Analysis Iterative Spiral

Miles and Huberman (1994) along with Patton (2002) recommend early and concurrent analysis during the process of data collection. The spiraling nature of the iterative process allows for multiple rounds of revisiting the data as additional questions occur (Srivastava & Hopwood, 2009). Figure 7 Data Analysis Iterative Spiral, illustrates the steps in the process of analyzing the collected data with the double arrows simulating a spiraling effect. The final step in the protocol is providing information as to how the data is managed including data coding for computer analysis (MAXQDA), monitoring and verification.
The coding used in analyzing the data combined descriptive, interpretive and pattern coding (Miles & Huberman, 1994, p. 57). The descriptive coding was used to assign units of meaning to inferential information compiled during the study (Miles & Huberman, 1994, p. 56). Application of descriptive coding to the interviews, and advisor group observations is the first cycle in the coding process (Saldana, 2011, p. 71). Once the data was “chunked” and coded, interpretive coding was used to analyze advisor interview data and advisor group observation data in order to identify underlying themes. According to Saldana (2011) “a theme functions as a way to categorize a set of data into an implicit topic that organizes a group of repeating ideas” (p. 139). During the first cycle of data coding, the researcher employed in vivo coding in order to “grasp what is significant to the participant’ (Saldana, p. 75). The allowance for coding outside the theoretical framework is particularly useful when interviewees express opinions that may give a clearer meaning to the question asked. In vivo codes were placed in quotation marks in order to distinguish participant-generated codes.

The second cycle of coding the data is pattern coding which are explanatory or inferential codes used to identify emergent themes. The interview data, and advisor group observation data were coded to reveal emergent themes. Based on the interview questions and focus of the advisor group observations, the themes were centered on high school faculty advisor support, impact of dual enrollment, high school/college partnership, student transition to college and student persistence in college.

The first step in the process of analysis was to review the data collected from the advisor group observations. Researcher reflective memos, and interpretations of the notes collected during observation confirmed observed patterns in the data that adds to the
theory of faculty-student interaction as a factor in college persistence. The transcription of the observation was coded utilizing descriptive codes to identify meaningful segments of text in the transcription. The descriptive codes were then grouped into like themes. Using interpretive coding the themes were analyzed for the underlying meaning. Following the identification of themes, the codes were assembled to analyze their commonality and to create a pattern code (Saldana, 2011, p. 152). According to Miles and Huberman (1994) several pattern codes can emerge from second cycle analysis (p. 72). As the analyzing of data progressed it was important that the researcher connect the research questions and theoretical framework to the emerging themes.

The coding of data collected from the one-on-one interviews with seven advisors, seven college sophomores, and four critical friends followed a similar process used in coding the advisor group observations. The researcher recorded most of the interviews and utilized a contact summary sheet in order to reflect on the information obtained. Each interview was transcribed and chunked into segments that were assigned descriptive codes. Previously identified codes (Appendix C) were used to begin the coding process. As the data was reviewed more codes emerged. The descriptive codes were grouped into like themes, which were analyzed for complexity of meaning. The data generated from the interviews were grouped into a smaller number of sets, themes or constructs resulting in pattern codes (Miles & Huberman, 1994, p. 69).

Interviews and observations were transcribed into Word documents and uploaded into the qualitative data analysis software, MAXQDA. The software was used to manage and analyze the data. MAXQDA, software that analyzes and codes complex data patterns, provided the researcher with the tools to enter previously created codes. The
descriptive codes assigned to the documents were color coded and highlighted in the software. (VERBI Software, 2010). In the first level coding the researcher identified codes for emergent themes and text segments that relate to each code (Kuckartz & Kuckartz, 2001, p. 9). In the second level of coding the researcher conducted pattern coding in order to group initial codes into a smaller number of themes (Kuckartz & Kuckartz, 2001, p. 11). Through a combination of hand coding and MAXQDA the researcher identified common patterns.

The concurrent collection and analysis of data proposed by (Yin, 2009; Miles and Huberman, 1994; and Patton, 2002) allowed the researcher to begin to create a holistic view of the research. The relationship between the faculty-student interactions, student support and dual enrollment became integrated rather than segmented data.

**Study Limitations**

The study was designed to describe the influence of a high school advising program on underserved dual enrollment students and their persistence to the second semester of sophomore year in college. Limitations present potential weaknesses in a study (Creswell, 1998, 2003). One limitation of this study was the transferability of the specific advising program and the lack of like-models in the literature. The available comparisons were found in schools that were designed by the same organization, The Big Picture Co. Other studies reviewed by the researcher tended to focus on college advising and did not consider a student’s high school advising experience.

Another limitation was the funding source for the dual enrollment program. The students in the Classes of 2008, 2009, and 2010 were able to take college courses under a state grant in partnership with the community college beginning in their sophomore year.
in high school. When the grant ended it was only through the established partnership between the high school and community college that students could continue taking college courses. Lack of funding for the dual enrollment program may impact replication of the program.

Although the study was specific to the high school advising program, other factors not considered in the study may also have an influence on student persistence in college.

**Validity and Credibility**

In order to ensure the validity of this study, the researcher was guided by the four criteria for developing trustworthiness of a qualitative inquiry as framed by Lincoln and Guba (2005). These are: credibility, dependability, confirmability and transferability. Also enhancing the internal validity of this qualitative research are the six strategies outlined by Merriam (1998): triangulation of data, member checks, long-term observation, peer examination, participatory research, and bias declaration. The researcher incorporated triangulation of the data, member checks, peer examination and bias declaration under the four criteria outlined by Lincoln and Guba (2005).

**Credibility** of the study was reflected in the use of research methods- the interview, observation, and documentation- that are well established in qualitative investigation. Credibility was established through the interview data, which was cross-referenced to determine if the advisors and the students support the research question that students enrolled in dual enrollment, receiving high school and college advising, persist through the first semester of sophomore year in college. Triangulation of data generated from eighteen interviews (seven advisor, seven college students and four critical friends),
advisor group observations and dual enrollment data, strengthened the credibility and integrity of this single-case study. According to Patton (2002) understanding inconsistencies in findings across different kinds of data can be illuminative and important (p. 556). Triangulation of the data strengthens a qualitative study by combining methods of evidence. It gains credibility by thoroughly triangulating the descriptions and interpretations, not just in a single step but also continuously throughout the period of study (Patton, 2002).

Member checking was used to assure accuracy. Interviewees were asked to review an email transcript of the interview, and send comments and corrections to the researcher. The researcher transcribed the observations and shared them with the faculty advisors for accuracy in understanding the connection of the Learning Plan to the exhibition.

Two colleagues of the researcher who looked for emerging themes and patterns acted as peer examiners of the transcripts that added to the data audit.

**Dependability and confirmability** of the research entailed a clear, step-by-step process undertaken by the researcher. Confirmability of the findings is supported by a detailed methodological description of the process, and an audit trail. The audit trail allows the observer to trace the course of the research step-by-step via the decisions made and procedures described (Shenton, 2004, p. 72).

**Transferability or external** validation is the degree that research findings can be generalized to settings similar to the one occurring in the study. A thick description of the case study will aid researchers in the application of the study to like research.
**Research bias** is a risk in both quantitative and qualitative studies. The checks for validity and credibility along with member checking and peer review aided in guarding against bias. The researcher had not established a relationship with the research participants prior to the study. The researcher selected the site because the school had an established faculty advising model and dual enrollment program. Triangulating the data and avoiding reliance on a single data source has the potential to purge biases (Denzin & Lincoln, 2000).

**Protection of Human Subjects**

The participants were asked to volunteer to take part in the study. They were given a written explanation of the study and a form to sign acknowledging that they were volunteering (see Appendix A). The interviews were conducted one-on-one in a private space. The participants’ time was accommodated requiring that the researcher be available so the participant was comfortable meeting at an agreed upon time. The participants in the study were advised that the information was collected for use in the research for a doctoral thesis and the anonymity for each participant would be preserved. The researcher stressed that each participant was volunteering to participate in the study and his or her participation may be discontinued at any time. They were assured that they would be assigned a pseudonym to further protect their identity.

Participants were informed that identifying data would be locked in the researcher’s files and would be destroyed after seven years following transcription and analysis.
Conclusion

The goal of this case study is to examine the influence of dual enrollment and high school advising on student persistence in college. The collected and analyzed data reflected the themes of selected theorists addressing the research question, “How are dual enrollment partnerships with high school faculty advisor support perceived to affect college retention for dual enrolled students?”

This chapter on research design and methodology details the rationale for a qualitative, descriptive single case study and the use of triangulation of the data (interviews, advisor group observations and dual enrollment credits), member checking, peer examination and bias recognition that was used in establishing trustworthiness of the data. A clearly defined and credible study will lead to transfer of the collected data in informing future research.
CHAPTER IV REPORT AND RESEARCH FINDINGS

Introduction

The purpose of this qualitative, descriptive single case study was to describe the process of how a high school/community college dual enrollment partnership and high school advising program was perceived to influence student persistence to the second semester of the sophomore year in college. This study documents the perceptions of seven college students in their second year of college, and seven high school faculty advisors currently working at the career and technical center regarding the influence of the dual enrollment program and support of the faculty advisor model on persistence in college. The findings revealed the attributes and qualities of the advisory program that make it successful in supporting students leading to persistence in college. The findings also point to the importance of the advising program in encouraging student motivation and confidence, themes that emerged during the research analysis.

The problem of practice in this study was the decline in the college retention rate of enrolled students over the last twenty years. Of specific concern was the rate of retention of underserved students. The research questions guiding the study were: 1) How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? 2) How do former dual enrollment students enrolled in the sophomore year in college perceive the support they received from the high school advisors? The final findings revealed that:

1) Student motivation and confidence were positively influenced by advising of dual enrollment students.
2) The pre-college experience of dual enrollment and faculty advisor-student interaction led to an understanding of commitment to goals through the use of the Learning Plan during their four years at the career and technical high school.

3) College sophomores viewed the support of high school faculty advisors in encouraging student self-advocacy with dual enrollment professors as having a positive influence on their college experience.

4) Dual enrollment students’ in-class interaction with college students aided in their transition to college.

The research questions guided the study in describing the perception of a relationship between the advising process in the dual enrollment program and a student’s persistence to the second semester of sophomore year in college.

Chapter IV describes the School Profile, which includes the mission of the career and technical high school, the advisory structure, the dual enrollment partnership agreement, and the profile of the study’s participants. Following the description of the school profile, the section on Data Collection and Analysis describes how the collected data from document review, interviews, and observations were analyzed and support the final findings.

The study of how the high school/community college dual enrollment partnership with faculty advisor support is perceived to influence student persistence to the second semester of the sophomore year in college involved multiple sources of data collection. According to Yin (2009) the use of varied sources of evidence in “any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information” (p. 116).
School Profile

The school selected for the study is a career and technical high school established in 1996 as an innovative state public high school. The school is located in a city in the Northeast. The criteria for selecting the school was the long-term, 1996, dual enrollment partnership with the adjacent community college, the diverse student population and the faculty advisor model that had been in existence since the establishment of the school. The dual enrollment program and faculty advisor model are the two pre-college attributes that are reflected in the theoretical framework and linked to the research questions.

According to the school’s state report card, the demographics of this diverse student population consist of an ethnicity made up of 42% Hispanic, 27% Caucasian, 27% African-American and 4% Asian, Native American or Multi-Racial. The federal school lunch data shows 65% of the students receiving free or reduced lunch. The average daily attendance rate is 91.9% and the graduation rate is 94.5% (Rhode Island Department Of Education, 2009).

The faculty advisor model is reflected in the learning design that defines the schools mission (Big Picture Co., 2010). The high school was the first of over 60 schools established by The Big Picture Co. whose objective was to design an environment that incorporated elements that were predicated on ten distinguishers (Appendix D) that work as a whole in defining the schools’ mission (p. 5). The learning design components are based on three foundational principles: first, learning must be based on the interests and goals of each student; second, a student’s curriculum must be relevant to people and places in the real world and third, a student’s ability must be authentically measured by the quality of his/her work (Litky & Washor, 2011, p. 1).
At the heart of the real world learning experience is the internship program, known as LTI (Learning Through Internships). Students pursue the learning goals through real world learning. The faculty advisor meets one-on-one with the student to discuss his/her interests and together they seek out an internship that personalizes his/her learning. A mentor who becomes part of the student’s learning team oversees the internship.

**Advisory Structure**

The advisory structure is the hub of the Big Picture learning design. Each student at the school is part of a small learning community of 15 students. The students remain with one faculty advisor for four years (Big Picture Co., 2010, p. 34).

The advisor is responsible for guiding the student’s learning progress. At the center of the process is the learning plan, the outgrowth of a team meeting consisting of the student, parents, and internship mentor and faculty advisor. The plan is reviewed after each trimester with the learning plan team. The faculty advisor meets one-on-one with each student weekly with the learning plan at the center of the conversation. Students focus on five learning goals in the plan. The goals are: empirical reasoning, quantitative reasoning, communication, social reasoning, and personal qualities. The students keep track of their goals with an online work tracker that is also reviewed when meeting with the advisor. The learning plan is viewed as a living document, one that is reassessed if students struggle meeting their learning goals.

The school Advisor Guide defines the role and responsibilities of the advisor for each grade level but notes that the guide contains more information than an advisor can
do every day with every student (Big Picture Co., 2010, p. 231). When asked to describe the role of the faculty advisor, the director of the high school stated:

The advisor’s role is to understand students’ strengths and weaknesses; support them to get the experience and skills they need to achieve goals. The advisor is also the social, emotional and academic guide for the students. If the advisor is unsure how to handle a situation, they go to the principal first. The school is a small environment and there’s a team of people in the school to help.

N. Diaz Bain, Co-Director (Interview, April 3, 2012)

**Dual Enrollment Partnership Agreement**

The partnership between the high school and community college began shortly after the school was founded in 1996. Students had the opportunity to take one college class a semester beginning in junior year. In 2008 a dual enrollment program funded by the state offered high school sophomores, juniors and seniors the opportunity to take two college courses a semester. The program gave students early course choice as opposed to having later enrollment. The funded dual enrollment program afforded students the opportunity to accumulate significant transferable college credits that had the potential to reduce their time in college leading to earlier degree completion.

Students are selected by the faculty advisor and school principal to take college courses based on a number of factors. First, they must be interested in taking a class. Second, the student must demonstrate responsibility in working toward their learning plan goals. Third, a student must have a good record of attendance. Fourth, students, parents/guardians, advisor and school principal must enter into a written agreement with the community college (Appendix B). According to the director of the school, there may
be instances where the principal and advisor suggest that a college class may be exactly what a student needs to get motivated. The college environment may challenge the student and positively impact his/her work at school.

**Participant Profile**

The advisors and students who volunteered to participate in this single case study were selected by purposeful sampling. The site of the study is a career and technical urban high school in the Northeast. The profile information for the seven advisors identifies the number of year’s teaching/advising at the career and technical high school and their current teaching assignment. The faculty advisors have all taught dual enrollment students. The information for the seven student participants includes the number of credits transferred to college and the type of college they are attending. This information, which was protected using pseudonyms, is provided in Table 2.

**Table 2 Participant Information**

<table>
<thead>
<tr>
<th>Faculty – Advisors (pseudonyms)</th>
<th># of years at the school</th>
<th>Teaching Assignment 2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sam</td>
<td>14</td>
<td>Gr. 11</td>
</tr>
<tr>
<td>Sarah</td>
<td>13</td>
<td>Gr. 12</td>
</tr>
<tr>
<td>Anthony</td>
<td>10</td>
<td>Gr. 9</td>
</tr>
<tr>
<td>Pam</td>
<td>5</td>
<td>Transition advisor</td>
</tr>
<tr>
<td>Ken</td>
<td>4</td>
<td>Gr. 9</td>
</tr>
<tr>
<td>Mitch</td>
<td>4</td>
<td>Gr. 12</td>
</tr>
<tr>
<td>Mikala</td>
<td>3</td>
<td>Gr. 11</td>
</tr>
<tr>
<td>College Students (pseudonyms)</td>
<td>Number of DE Credits transferred</td>
<td>College attending</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Jeannine</td>
<td>21</td>
<td>4 year private</td>
</tr>
<tr>
<td>Cora</td>
<td>21</td>
<td>4 year private</td>
</tr>
<tr>
<td>Al</td>
<td>6</td>
<td>4 year- public attended Comm. college</td>
</tr>
<tr>
<td>Dolores</td>
<td>36</td>
<td>4 year-public</td>
</tr>
<tr>
<td>Nester</td>
<td>25</td>
<td>4 year-private</td>
</tr>
<tr>
<td>Ana</td>
<td>12</td>
<td>Comm. college-will transfer</td>
</tr>
<tr>
<td>Ed</td>
<td>6</td>
<td>Comm. college-will transfer</td>
</tr>
</tbody>
</table>

The seven college students interviewed for the study are members of an underserved population. Underserved students are students who do not receive equitable resources in the same manner that other students do and as a consequence are less likely to achieve to high levels of academic performance (New England Comprehensive Center, 2008). The college sophomores identified as Dominican, Cape Verdean, African American and Nigerian.

The researcher when interviewing the students and faculty advisors collected the data in Table 2. The information provided verified that the participants met the criteria for selection. The seven faculty advisors have three or more years of experience in the high school. Faculty advisors stay with students for a four-year loop, thus they had an opportunity to interact with dual enrollment students for at least three years.

The college sophomores participating in the study transferred at least 6 credits when matriculating to a two or four year college. A study on postsecondary achievement
of dual enrollment students found that enrollment in the dual enrollment program and accumulating college credits, defines the student’s intention to attend a postsecondary institution (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007).

Sophomores in college were selected to participate in the study as a result of Vincent Tinto’s research on student departure which found that students’ commitment to the institution at the end of their first year in college is a strong predictor of the students’ intent to persist (Tinto, 1993). The study by Karp et al. (2007) found that dual enrollment students are statistically significantly more likely to persist in college to a second semester of the sophomore year.
Data Collection and Analysis

Data Collection and Analysis describes how the collected data from document review, interviews, and observations were analyzed and support the final findings.

Document Review

Results from review of 2008-2010 dual enrollment course and credit data

Final Finding

1. Approximately 92% of career and technical high school students received college credits between Spring 2008 and Spring 2010.

   During the period, Fall 2007- Spring 2011, when the dual enrollment program was funded by the state, the partnership kept a record of student course enrollment. The data included: student name, advisor, college course, semester enrolled, grade in the course and credits earned. The researcher was interested in narrowing the data field to reflect the period of time when the college student participants were enrolled in dual enrollment (DE) classes. This period was Spring 2008-Spring 2010. The rationale for narrowing the data field was to compare students taking dual enrollment classes during the same period as the study participants.

   Data for the Spring 2008 through the Spring 2010 were sorted by semester in order to determine if other students were also successful in DE classes when the participants were enrolled. The process of isolating the Spring 2008-Spring 2010 semester data involved sorting the class list of courses, students, advisors and credits by semester. The next step was to determine how many students took classes each semester and if credits were earned in the courses. The purpose of obtaining this information was
to determine if the data supported student and faculty advisor interview responses regarding the merits of dual enrollment. Also included in the data were the students’ advisors. Inclusion of the number of advisors demonstrated that dual enrollment students were not selected from a small group of advisors.

**Table 3 Illustrates the findings from the dual enrollment course and credit data Spring 2008-Spring 2010.**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Students enrolled in DE courses</th>
<th>No. of students enrolled in DE courses by semester</th>
<th>No. of students who earned 3 credits</th>
<th>No. of students who earned 6 credits</th>
<th>Total no. earning credits</th>
<th>% of enrolled students earning credits</th>
<th>No. of advisories represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2008</td>
<td>41 (4 study participants)</td>
<td>29 (4)</td>
<td>9 (0)</td>
<td>38</td>
<td>92</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Fall 2008</td>
<td>53 (5 study participants)</td>
<td>45 (2)</td>
<td>3 (3)</td>
<td>48</td>
<td>90</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Spring 2009</td>
<td>52 (5 study participants)</td>
<td>44 (1)</td>
<td>4 (4)</td>
<td>48</td>
<td>92</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Fall 2009</td>
<td>58 (5 study participants)</td>
<td>43 (2)</td>
<td>11 (3)</td>
<td>54</td>
<td>93</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Spring 2010</td>
<td>40 (3 study participants)</td>
<td>22</td>
<td>16 (3)</td>
<td>38</td>
<td>95</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

Numbers in parentheses ( ) represent credits earned by the seven college students interviewed for the study.

Once the data was sorted by semester, the researcher calculated the number of students who were enrolled in dual enrollment courses each semester. Based on the semester credit data recorded for each student, the researcher determined that
approximately 92% of the students received college credits. The finding was meaningful because the career and technical high school students do not take traditional courses nor do they receive grades or a grade point average (GPA). It is only when they attend a dual enrollment class that they must change their approach to studying and focus on grades and credits.

The unanticipated finding from the dual enrollment credit data prompted the researcher to add an additional question when interviewing faculty advisors and students. The question added was:

Many students taking DE courses received college credits. To what do you attribute their success in the courses?

**Interview results**

The second step in the process of data collection involved conducting individual interviews with seven faculty advisors, and seven college sophomores. The primary data set for this study was the semi-structured interview.

During the course of transcribing the interviews the researcher noticed that common themes emerged in the seven faculty advisor and seven college student interviews. The emergent themes in the faculty advisor interviews were: dual enrollment partnerships, student motivation, and faculty advisor support. Miles and Huberman (1994) and Michael Patton (2002) recommend early and concurrent analysis during the process of data collection. The themes that emerged became part of the coding system entered into the qualitative data analysis software.

The researcher downloaded the faculty advisor interviews into software called MAXQDA 10 (Verbi Software, 1998-2011) and entered the codes corresponding to the
interview questions and the emerging themes. Table 4 displays the themes, codes, meanings and theorists.

Table 4  Themes, Initial Codes, Meaning of Codes and Theorists, Corresponding to Faculty Interview Questions

<table>
<thead>
<tr>
<th>Emerging Themes</th>
<th>Codes Corresponding to Interview Questions for Faculty Advisors</th>
<th>Meaning of Codes</th>
<th>Theorists</th>
</tr>
</thead>
</table>
| Dual enrollment partnership          | DESTSU-CT DECRTR                                              | Dual enrollment college transition  
Dual enrollment credit transfer       | V.Tinto  
Tinto & Pascarella                  |
| Student motivation                   | DEINDEV DEPERDEV                                              | Dual enrollment, intellectual development  
Dual enrollment, personal development | A.Astin  
A.Astin  
A.Astin |
| Faculty advisor support             | DESTSU DESTIN                                                 | Dual enrollment, student support  
Dual enrollment, student involvement |                    |

**College student semi-structured interview results**

The emergent themes in the college student interviews were: Faculty advisor-student relationship and student support through the Learning Plan.
Table 5 summarizes the codes corresponding to the interview questions for college students.

### Table 5  Themes, Initial Codes, Meaning of Codes and Theorists Corresponding to Student Interview Questions

<table>
<thead>
<tr>
<th>Emerging Theme from Student Interviews</th>
<th>Codes Corresponding to Interview Questions for Students</th>
<th>Meaning of Codes</th>
<th>Theorists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty advisor-student relationship</td>
<td>DESTSU-CP</td>
<td>Dual enrollment student support-college persistence</td>
<td>V.Tinto</td>
</tr>
<tr>
<td>Student support- the Learning Plan</td>
<td>DEFA-SR</td>
<td>Dual enrollment faculty-student relationship</td>
<td>Tinto &amp; Pascarella</td>
</tr>
<tr>
<td></td>
<td>DESTSU-CT</td>
<td>Dual enrollment student support-college transition</td>
<td>A.Astin</td>
</tr>
<tr>
<td></td>
<td>DECRTR</td>
<td>Dual enrollment credit transfer</td>
<td>Tinto &amp; Pascarella</td>
</tr>
</tbody>
</table>

**Critical Friends interview results**

The four critical friends were interviewed for the case study in order to provide feedback on the information collected from the interviews and researcher observations. The feedback is based on their experience in the school and with the dual enrollment program. The individuals selected as critical friends were the coordinator of the dual enrollment program, the community college liaison, a school principal and former faculty
advisor, and the co-director of the high school who was also a former faculty advisor.

The critical friends were interviewed between March and May 2012 after the faculty advisors and college students and during the course of the observations.

The interview questions asked of the friends were semi-structured with specific focus on their position at the school and the themes that had emerged from the faculty advisor and student interviews. The interviews were conducted in private locations on the high school and community college campus and lasted approximately 60 minutes. Table 6 lists the emergent themes, and related interview questions. Following Table 6 are excerpts from the participants’ responses.

**Table 6 Critical Friends Interview Questions**

<table>
<thead>
<tr>
<th>Emergent Themes</th>
<th>Interview Questions</th>
<th>Critical Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual enrollment partnership</td>
<td>1. What would you say are the strengths of the dual enrollment partnership?</td>
<td>Coordinator of DE</td>
</tr>
<tr>
<td></td>
<td>2. What would you like to see changed or improved about the partnership?</td>
<td>Community college liaison</td>
</tr>
<tr>
<td></td>
<td>3. What are the advantages students have who participate in dual enrollment? Challenges?</td>
<td>Principal</td>
</tr>
<tr>
<td></td>
<td>4. How would you describe your communication with the college instructors regarding dual enrollment?</td>
<td>Co-Director</td>
</tr>
<tr>
<td>Student motivation</td>
<td>How has student motivation changed based on their college class experiences?</td>
<td>Principal &amp; Co-Director</td>
</tr>
<tr>
<td>Faculty advisor support</td>
<td>How do the advisors adjust their teaching when it comes to assisting students in college classes?</td>
<td>Principal &amp; Co-Director</td>
</tr>
</tbody>
</table>
Student support: The Learning Plan

Course grades for the class of 2010 and 2011 indicated that students are doing quite well. To what do you attribute the students’ success?  
Principal & Co-Director

How significant is the Learning Plan in guiding students’ daily and long-range planning?  
Principal & Co-Director

Excerpts from Critical Friends’ Responses to Questions in Table 6

1. What would you say are the strengths of the dual enrollment partnership?

   **DE Coordinator:** Strength of the program is the willingness of the community college to work with a non-traditional program.

   **Liaison:** Gives students a chance to put their toe in the water while they have the support of the HS.

   **Principal:** The program is a benefit to students in allowing them to pursue subjects that may not be available to them in HS.

   **Co-Director:** The community college understands our high school model. The process is in place so it makes it more seamless. DE is definitely a program that needs to continue in urban schools. Kids need to believe that they can meet the challenge of college.

2. What would you like to see improved?

   **DE Coordinator:** Funding needs to continue. Consistency is important.

   **Liaison:** Funding is an issue.

   **Principal:** State funding needs to stabilize.

   **Co-Director:** Definitely need funding in order to continue the program.

3. What are the challenges faced by the students?

   **DE Coordinator:** Changing their mindset regarding grades, exams etc.
Liaison: Dealing with professor biases about being high school students.

Principal: Reading level of material sometimes hard for students.

Co-Director: Vacations are hard because the students have to go to college classes even though their HS is on break. The advisors remind them that they have to go.

4. How has student motivation changed based on their college class experience?

Questions on Student Motivation, Faculty advisor support, and the Learning Plan were asked of the Principal and Co-Director who had direct involvement with students and faculty.

Principal: I have noticed that once they start to come and go they come in like a different student.

Co-Director: It’s incredible! All of a sudden you see their leadership change; their sense of responsibility increases. For other students it creates an environment of respect and motivation; taking college classes helps the culture all around; creates an environment of pursuing higher ed. Other students begin to think, “I can do this too (take a college class).”

5. How do advisors adjust their teaching when it comes to assisting DE students?

Principal: Advisors all went to college so they have personal experience with exams and how to assist students in preparing for the college quizzes, tests and exams. I often see advisors teaching students how to organize their notes, take notes from textbooks and form study groups. But learning is not all about the structured lesson. Advisors teach them how to create a timeline for independence.

Co-Director: The advisors utilize the Learning Plan during the individual meetings with students. Many advisors incorporate the college syllabus into the Learning Plan in order to keep informed of DE assignments. The advisor also can reach out to other school resources if students need academic support.

6. Have the students been successful in the DE classes?

Principal: I attribute their success to a few factors:
First, the support and guidance that students receive from the advisors during the individual weekly meeting. There are multiple levels of accountability. If a student is struggling there is mid-semester grades, essay grades and quiz grades.
Second, students who are enrolled in DE chose to take the class so they are motivated to do well.

Co-Director: Yes, with the odd one here and there. Their success in the classes is pretty consistent every year.

7. How significant is the Learning Plan in guiding students’ daily and long-range planning?

Principal: Students have been using the Learning Plan since 9th grade. It is a tool that they are very used to. The advisor incorporates their DE syllabus into the Learning Plan so they are clear on the goals and course expectations.

Co-Director: The Learning Plan is a part of their learning. It is used during the one-on-one and is distributed as a guideline during the Exhibition.

The responses by the Critical Friends were infused throughout the thesis in direct quotes or supporting information.

Observations

The third step in the data collection process was the observation of five dual enrollment students in three advisor groups. The first advisor group observed by the researcher was a junior advisory. Three of the dual enrollment students were the focus of the observations. On each occasion the student produced his/her learning plan to guide the one-on-one discussion. Also supporting the learning plan was the student work tracker that enabled the advisor to view the student’s progress. The advisor discussed the college course goals and the student internship. The conversation centered on how the student would portray his/her progress in the fourth quarter exhibition in May.

During the one-on-one observations the researcher followed the guidelines of Saphier (2008, p.27) by taking copious, literal notes of faculty advisor-student interaction. The researcher concentrated on the advisor process and the relationship of the observed interaction between advisor and advisee. The researcher observed the same
students present the 45-minute exhibitions. Prior to the exhibition each student
distributed a copy of the individual learning plan to the audience observers. The plan
guided the observers through the steps in the student’s exhibition. Following the
observations and exhibitions the researcher shared the transcriptions with the faculty
advisors for accuracy in understanding the connection of the learning plan to the
students’ goal planning.

Dual enrollment students in the two remaining advisories were seniors. When
meeting one-on-one with their advisors the students were preparing for their final
exhibitions. The one-on-one in both meetings was more informal and less structured. The
students portrayed a sense of independence in setting their own goals. The student-faculty
advisor interaction depended less on visually following the learning plan than discussing
present and future goals. The researcher attended the exhibitions of both seniors and, like
the juniors, they distributed the learning plan to the audience observers.

The transcribed observations of the one-on-one meetings and the exhibitions were
downloaded into the software MAXQDA for first cycle coding and cross-referencing
with the faculty advisor and college student data.

**Coding**

Prior to using MAXQDA 10 the researcher developed theory driven codes based
on the Start List of Codes recommended by Miles and Huberman (1994,p. 59). The
research questions were the basis for the creation of the eight initial codes. The initial
codes were used in the hand-coding of the interviews after each transcription. Once the
interviews and observations were downloaded into the MAXQDA10 software, the
researcher entered the initial code meanings rather than the symbols. Thus, DESTSU
became dual enrollment and student support. Descriptive words were more conducive to the design of the software. Table 7 lists the research questions, the initial codes that were developed based on the questions and the codes entered into the computer software.

**Table 7 Research Questions, Initial Codes and MAXQDA 10 Codes**

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Eight Initial Codes</th>
<th>Meaning of Initial Codes entered into MAXQDA 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How are dual enrollment partnerships with faculty advisor support perceived to affect college retention for enrolled students?</td>
<td>DESTSU-CT</td>
<td>Dual enrollment, student support</td>
</tr>
<tr>
<td></td>
<td>DECRTR</td>
<td>College transition</td>
</tr>
<tr>
<td></td>
<td>DESTSU</td>
<td>Dual enrollment, student support</td>
</tr>
<tr>
<td></td>
<td>DESTIN</td>
<td>Dual enrollment, student involvement</td>
</tr>
<tr>
<td></td>
<td>DEINDEV</td>
<td>Dual enrollment, intellectual development</td>
</tr>
<tr>
<td>2. How do former DE students enrolled In the sophomore year in college perceive the support they received from high school/college advisors?</td>
<td>DEPERDEV</td>
<td>Dual enrollment, Personal development</td>
</tr>
<tr>
<td></td>
<td>DESTSU-CP</td>
<td>Dual enrollment student support</td>
</tr>
<tr>
<td></td>
<td>DEFA-S</td>
<td>College persistence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dual enrollment faculty-student relationship</td>
</tr>
</tbody>
</table>

The next step in the process of code development was to determine if there were dominant codes. Dual enrollment emerged as a dominant or parent code under which the connected codes became sub-codes. The hierarchical organization of codes created a visual representation of the patterns emerging through the coding of the downloaded documents.
The process of analyzing the data in MAXQDA 10 involved highlighting segments of a document and assigning a code. The purpose of assigning a code was to manage the vast amount of data that was generated through the study. Miles and Huberman (1994) explain:

Data reduction is not something separate from analysis. It is part of analysis. The researcher’s decisions—which data chunks to code and which to pull out, which evolving story to tell—are all analytic choices. Data reduction is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that final conclusions can be drawn and verified (p.11).

The researcher carefully combed each document segment adding descriptive codes that represented the meaning of the highlighted text. The process of analyzing twenty-eight documents, which included interviews and observations, resulted in creating forty-four descriptive codes during the First Cycle of coding. The use of descriptive codes were recommended by Saldana (2009) for beginning qualitative researchers and for those using qualitative analysis software such as MAXQDA (p. 73). Table 8 illustrates the coding reduction process of highlighting text, assigning codes and first and second cycle code reduction.

Table 8  Coding Reduction Utilizing MAXQDA 10

<table>
<thead>
<tr>
<th>Excerpt from Interview</th>
<th>MAXQDA Codes</th>
<th>First cycle reduction</th>
<th>Second cycle reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I received a lot of support from my advisor. I would give my advisor my college papers and she would help me edit them. When I had difficulty with a DE science class, my advisor connected me with another advisor who had a degree in</td>
<td>Advisor support</td>
<td>MAXQDA was used to reduce 44 codes to 25 during the process of first cycle code reduction of participant interviews. The iterative process continued until the following codes emerged as the most common descriptive</td>
<td>MAXQDA generates a list of active codes and the number of times that the codes are utilized. The researcher cross-referenced this document with the list of emergent codes from the first cycle iterative process. Codes utilized most frequently were</td>
</tr>
<tr>
<td></td>
<td>Dual enrollment</td>
<td>College work</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student motivation</td>
<td>Faculty-student</td>
<td></td>
</tr>
</tbody>
</table>
Biology. My advisor taught me how to incorporate my college assignments into my Learning Plan.”

<table>
<thead>
<tr>
<th>Excerpt from Researcher Observations</th>
<th>MAXQDA Codes</th>
<th>First cycle reduction</th>
<th>Second cycle reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior Class: One-on-One Meeting between Advisor and Student April 2012 College class discussion. Student uses Learning Plan to discuss college class goals and assignments. Student says that professor talks too fast so she doesn’t always get what he says. Mikala, advisor, reviews student’s class notes.</td>
<td>Dual enrollment partnership Learning Plan goals Faculty-student relationship Advisor support</td>
<td>MAXQDA was used to reduce 9 sub-codes to 4 predominant codes during the process of first cycle code reduction of researcher observations. Sub-codes were reduced to reflect the predominant codes. Codes reduced were: 1) College courses, 2) expectations, 3) challenges 4) parent support, 5) homework, 6) motivation, 7) grades 8) credits 9) scholarship opportunities.</td>
<td>MAXQDA generates a list of active codes and the number of times that the codes are utilized. The researcher cross-referenced this document with the list of emergent codes from the first cycle iterative process. Codes utilized most frequently were consistent with the findings during the iterative process and consistent with the researcher’s expectations.</td>
</tr>
<tr>
<td>Mikala asks to see the syllabus so they possibly can meet with the prof. together. Office hours are not in evidence. Mikala suggests that student email prof. re explanation of particular assignment Mikala asks questions about student’s notes: Mikala gives student positive feedback engaging student in a positive conversation about the class.</td>
<td>*Faculty-student relationship *Advisor support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advisor support</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty-student relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Faculty-student relationship</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Advisor support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
During First Cycle coding of the participant interviews and observations the researcher reviewed the code system and analyzed the frequency of code use. During this process of reviewing the interviews, the forty-four codes were reduced to twenty-five based on similarities to other codes that were utilized more frequently. The researcher continued the iterative process of the spiraling review of the codes in relation to the interview data. The researcher then determined through the number of instances that a code was used across participants for a given question, if there was a hierarchy of use for certain codes. MAXQDA 10, software recommended by Dr. Alan Stoskopf, generated a list of codes in the code system that indicated the number of times that a code was used throughout the study. The researcher cross-referenced the code system with the list of emergent codes from the first cycle iterative process. The hierarchical process led to the Second Cycle coding resulting in the emergence of four dominant themes. The themes that emerged were dual enrollment partnership, faculty-student relationship, faculty advisor support, and student motivation.

**Coding of Observations**

The First Cycle coding of participant observations illustrated in Table 8 revealed that nine sub-codes and four parent codes were used to describe highlighted segments of the researcher’s observations. The nine sub-codes were:

- college courses
- parent support
- credits
- * expectations
- * homework
- * grades
- * challenges
- * motivation
- * scholarship opportunities

During the process of code reduction the researcher combined the nine sub-codes under the four parent codes: dual enrollment partnership, faculty-student relationship, advisor
support, and student motivation. The predominant codes that emerged from the second cycle reduction corresponded with the faculty advisor and student interview results.

**Visual Display of Coding Process**

The researcher utilized MaxMaps (Verbi Software, 1998-2011) to visually display the First Cycle coding process and the connecting patterns that emerged during the Second Cycle coding of the interview and observation documents. The interview responses of faculty advisor Mitch is an example of first cycle coding in MAXQDA (Appendix E). The coded responses were then displayed as symbols that appear in the document Mitch’s Interview. Figure 9 represents the document Mitch’s Interview and the codes that represent Mitch’s responses.

![Figure 8 First Cycle Coded Responses for Mitch’s Interview](image-url)
The vertical rectangle represents Mitch’s interview. The surrounding horizontal rectangles represent the codes associated with his interview. There were twenty-two codes identified in the initial coding of Mitch’s interview.

The next step in the process of code reduction and identifying patterns was to determine code frequency and association with emerging themes. MAXQDA generated a list of active codes and the number of times that the codes were utilized. The researcher cross-referenced this document with the list of emergent codes from the first cycle iterative process. Codes utilized most frequently were consistent with the findings during the iterative process and consistent with the researcher’s expectations. The researcher generated a map of the codes identified in second cycle coding, frequency of codes in the document and relationship to identified themes. Figure 10 is the map generated for Mitch’s interview in MAXQDA.
Figure 9  Map of Mitch’s Interview: Codes and Frequency of Codes

Mitch’s interview is at the center of the map. The codes, horizontal rectangles, have been reduced from the twenty-two first cycle codes to eleven codes in the second cycle. The symbol attached to each code indicates the instances of the code appearing in the document, Mitch’s Interview. The number of instances was set at a maximum of five in order to fit the map on the page. The thickness of the line drawn from the document to the code indicates that the frequency of the code appearing in the document is greater than the five represented. The codes advisor support, dual enrollment/college courses
and faculty-student relationships high school (HS) appear frequently in Mitch’s interview.

Once the predominant codes were identified, the researcher downloaded a code quote matrix from MAXQDA 10. The matrix enabled the researcher to retrieve all participant responses by code. The researcher identified the high frequency codes and reviewed the interview responses corresponding to the codes and emergent themes.

**Data Analysis**

The theories of Alexander Astin (1975) and Vincent Tinto (1993) guided the researcher in developing interview questions that resulted in the emerging themes of dual enrollment partnership, faculty–student relationship and advisor support. The results of studies (Hoffman, Vargas, and Santos, 2008; Karp, Calcagno, Hughes, Jeong, & Bailey, 2007; Williams, 2010) on the effect of dual enrollment on college persistence further supported the themes that emerged. References to the themes were consistent throughout the faculty advisor and student interviews conducted in March and April. Also recurring throughout the interview process were references to the learning plan and student motivation that were unanticipated. Although studies (Swanson, 2008) did reference student motivation, faculty advisors at the career and technical center consistently commented on the positive change in motivation as a result of dual enrollment participation. The learning plan emerged as a theme in interviews with the college students and was supported during the one-on-one observations between faculty advisors and advisees. Students credited the use of the learning plan as a beneficial tool that focused their studies on meeting academic goals and time management. Vincent Tinto
(1993) describes the importance of goal commitment and student motivation as attributes that influence a student’s decision to continue in college.

The themes supported the research question regarding the effect of dual enrollment partnerships and high school faculty advisors’ support on college retention for enrolled students. The perceptions of teachers, students and critical friends on the importance of dual enrollment, advisor support, and faculty advisor-student relationships support the theories of Alexander Astin and Vincent Tinto that a student’s pre-college experience influences his/her decision to persist in college. The importance of faculty-student relationships gained further support in the longitudinal study by Pascarella and Terenzini (2001) that revealed the positive influence of faculty-student interaction on student engagement in college.

**Themes**

The researcher anticipated that the themes of dual enrollment partnership, faculty–student relationship, and advisor support would emerge as consistent themes based on the research questions and early analysis of each interview transcript. Also indicating that the themes were consistently referenced were the number of instances that the themes appeared in the MAXQDA code system. Themes that were unanticipated and consistently surfaced when reviewing the interview and observation transcripts were student motivation, and the academic learning plan. Table 9 lists the five themes that were identified and the frequency with which the themes appeared in the twenty-eight documents.
Table 9  Frequency of themes in twenty-eight documents

<table>
<thead>
<tr>
<th>Themes</th>
<th>Frequency of Themes (# of times in 28 Documents)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual Enrollment Partnership</td>
<td>120</td>
</tr>
<tr>
<td>Advisor Support</td>
<td>78</td>
</tr>
<tr>
<td>Faculty-Student Relationship</td>
<td>42</td>
</tr>
<tr>
<td>Student Motivation</td>
<td>50</td>
</tr>
<tr>
<td>The Learning Plan</td>
<td>56</td>
</tr>
</tbody>
</table>

The final findings with supporting data are listed under each theme for faculty advisor, college student interviews and observation of dual enrollment students in advisor groups.

**Dual Enrollment Partnership Theme**

*Final Findings*

2. Dual enrollment partnership commitment was a positive experience.

3. Dual enrollment in-class interaction with college students aided in their transition to college.

**Interview data supporting findings**

Faculty advisors and college students perceived the dual enrollment partnership to have positively impacted the students at the career and technical center. Table 10 lists primary data set questions pertaining to dual enrollment partnership and excerpts retrieved from the responses in the code quote matrix.
Table 10  Dual Enrollment Partnership Theme: Interview Questions and Excerpts from Responses

<table>
<thead>
<tr>
<th>Participants</th>
<th>Interview Questions</th>
<th>Excerpts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty advisors</td>
<td>1. Based on your experience what would you say are the strengths of the DE partnership?</td>
<td>“Students have support from the high school.”  “The experience gave them a sense of what college would be like. It was very real to them. They had less fear, believing that it was more attainable.”</td>
</tr>
<tr>
<td></td>
<td>2. What would you like to see improved?</td>
<td>“Funding needs to continue” “more options for course selection.”</td>
</tr>
<tr>
<td></td>
<td>3. What challenges are faced by students who participate in the DE program?</td>
<td>“A challenge would be the amount of work and firm deadlines.”</td>
</tr>
<tr>
<td></td>
<td>4. How do you envision the DE program impacting a student’s college choice?</td>
<td>“Accumulation of college credits gave them more options for college.”</td>
</tr>
<tr>
<td></td>
<td>5. Many of the students received credit for the courses taken. To what do you attribute their success?</td>
<td>“Students taking DE classes are motivated to do well.” “Students receive support from advisors during one-on-one.” Students needing specialty subject help are connected with a tutor.”</td>
</tr>
<tr>
<td>College students</td>
<td>1. How did the DE program impact your college choice?</td>
<td>“I wanted a 4-year college experience after taking classes at the community college.” “I believed that I could do the work and set my sites higher.”</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2. Did you receive college credit for the courses taken?</td>
<td>“I received 36 credits.” I took three courses and got 9 credits.”</td>
<td></td>
</tr>
<tr>
<td>3. To what do you attribute your success in the courses?</td>
<td>“I was motivated to do well.” “I got help from my advisor. She would help me edit my papers.” “My advisor helped me learn how to read a college text.”</td>
<td></td>
</tr>
<tr>
<td>4. Did your involvement in DE help you in transitioning to college?</td>
<td>“Definitely! I didn’t have to go through getting used to a college campus and understanding the meaning of a syllabus.” “It was easier to adjust to the work after taking DE.” “Experience in DE helped me when I was tempted to call faculty by their first names as we do in HS.” “Dual enrollment helped me overcome the fear of working in groups with college students.”</td>
<td></td>
</tr>
<tr>
<td>5. Did your DE credits transfer to college?</td>
<td>“The college I am attending accepted all of my credits.” “One elective did not transfer.”</td>
<td></td>
</tr>
<tr>
<td>6. How did you learn about the DE program at the community college?</td>
<td>“I learned about it during the Monday morning announcements. My advisor then approached me about enrolling in a class.” “I knew a girl who was in DE. I thought that if she can take a college class, so can I. My advisor signed me up.” “The Director told my mother about the program.”</td>
<td></td>
</tr>
</tbody>
</table>
Faculty advisors viewed the dual enrollment program as a benefit for students by allowing them to experience college while in high school. The students and faculty advisors considered the support that students received while attending dual enrollment classes a contributing factor in the students’ success in the classes. Student motivation was also viewed as important for students’ success.

Feedback from the coordinator of dual enrollment, a critical friend in the study, indicated that the success of the partnership was due to the good relationship that existed between the high school and the community college which allowed for the continuation of the program when the grant period ended.

The community college liaison, another critical friend, noted that the alternative nature of the career and technical high school posed an initial challenge for the students when taking DE classes. Support from faculty advisors helped the students’ transitions.

Advisors acknowledged that there were challenges for students taking a dual enrollment class. Challenges included lack of textbook familiarity due to the non-traditional career and technical high school model, and late or missing work since failing grades were not a consequence at the high school. Advisors attempted to prepare students for these challenges prior to dual enrollment when meeting with them during the one-on-one advisor meetings.

The college students talked about the initial challenge of integrating into the college classroom environment when in high school. Advisors addressed student concerns of acceptance during the one-on-one meeting, offering support and brainstorming with dual enrollment students who had taken college classes the previous semester. The initial fear was overcome by having support from the high school advisory
and by becoming involved in study groups with freshman and sophomore students. The college student study participants credited the dual enrollment experience as having prepared them for working with older students when they entered college.

**Observation data supporting final findings**

The third step in the data collection process focused on the observation. In April and May 2012 the researcher observed five dual enrollment students during one-on-one advisor meetings and during student exhibitions at the career and technical high school. The results of the observations are categorized by the themes that emerged from the faculty advisor and college student interviews. The students are identified as Student A-E. Highlights of what took place between the student and advisor and during the exhibition are noted in the tables following each theme.

**Table 11  Dual Enrollment Partnership Theme: Observation of Student –Advisor Meeting and Exhibition**

<table>
<thead>
<tr>
<th>Student</th>
<th>Advisor</th>
<th>One-on-One Meeting with Advisor</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Junior</td>
<td>Mikala</td>
<td>Student A discusses her History of Theater class with her advisor. The course presents a different perspective on theater, which she finds interesting. She is in a study group with college students.</td>
<td>During her exhibition student A discussed her DE class and why she found it interesting.</td>
</tr>
<tr>
<td>B - Junior</td>
<td>Mikala</td>
<td>Student B is having difficulty managing his time. The class does not interest him the way he</td>
<td>Student B focused on a music project that he is developing for his internship.</td>
</tr>
<tr>
<td>Name</td>
<td>Student</td>
<td>Description</td>
<td>Notes</td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>C - Junior</td>
<td>Mikala</td>
<td>Student C is auditing a class at a private college because the community college did not have the course that she wanted. She is not part of a study group.</td>
<td>The college class was one of five goals that Student C talked about during her exhibition.</td>
</tr>
<tr>
<td>D - Senior</td>
<td>Mitch</td>
<td>Senior D and advisor discussed her college research paper. Mitch directed her to several search engines. They discussed her grades in the dual enrollment courses that she is taking. She is actively involved in a study group with college students.</td>
<td>Student’s exhibition focused on: DE, her internship, mentor, and major project.</td>
</tr>
<tr>
<td>D - Senior</td>
<td>Sara</td>
<td>Senior E is taking a Two Dimensional Design Class. Advisor asks how she will incorporate the class into her exhibition. Advisor gives her suggestions. She is not in a formal study group but discusses her project with others in the class.</td>
<td>Student incorporated advisors suggestions When observing the exhibition the researcher noticed that the student made the suggested connections.</td>
</tr>
</tbody>
</table>
The overall tenor of the conversations between advisors and students reflected positively on the dual enrollment experience. Even Student B who was struggling with the course content became animated when he received a passing grade on the mid-term.

During the advisor meeting students referenced the college study group. The juniors who were in a formal group felt a sense of inclusion by the college students and wanted to be active group members. The seniors had previous experience and considered study group involvement as part of the course.

The students discussed their dual enrollment experience during the exhibition and how the course was part of the Big Picture Co. (2010,p.5) philosophy of learning in the real world. Observations supported the finding that dual enrollment partnership commitment was a positive experience.

**Advisor Support Theme**

**Final Finding**

4. Faculty advisor support during dual enrollment improved student confidence.

**Interview data supporting finding**

**Table 12 Advisor Support Theme: Interview Questions and Excerpts from Responses**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interview Question</th>
<th>Excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>College students</td>
<td>1. What support did you receive when taking the DE classes in high school?</td>
<td>“My advisor gave me help when we met one-on-one and reviewed my learning plan.” “My advisor helped me learn how to read college texts.” “I needed a tutor and my advisor helped me find a Biology major.”</td>
</tr>
<tr>
<td></td>
<td>2. Who initiated the support?</td>
<td>“During the weekly one-on-one when we reviewed my learning plan the advisor</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
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<td>---</td>
</tr>
<tr>
<td>3. Do you believe that the support you received gave you confidence to handle college-level work?</td>
<td>‘Yes. My advisor believed in me. She made me feel like I could do the work.’ “Absolutely! Without his help I would have been lost!” “I was having difficulty with a writing assignment. My advisor pointed out that I had done extensive writing before. She helped me see the connection between what I had done and what I needed to do in the college class.” “The professor in one of my college classes said that he expected high school students to fail. I discussed this with my advisor and she spoke with the DE coordinator. After talking to my advisor I felt like my voice was heard.”</td>
<td></td>
</tr>
<tr>
<td>4. Give examples.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interviews with advisors indicated that there was a shared commitment to supporting students and carrying out the vision of the career and technical high school, focusing on one student at a time. Advisor support was demonstrated through:

- One-on-one meetings with students
- Learning plan goal incorporation
- Homework and assignment support for dual enrollment
- Skills learned through advisories at the high school,
- Presentation skills through exhibitions
- Project organization
Advisors discussed their philosophy of advising when being interviewed. Some advisors were concerned with the balance between supporting and letting go. All focused on giving the students the tools to advocate for themselves. Student problem solving and self-advocacy were skills that advisors incorporated into their weekly one-on-one meetings with DE students. Since dual enrollment students were used to one faculty advisor at the career and technical high school, the transition often required advisor support. One advisor met with students to discuss strategies when they were struggling with an assignment. He told them to “dig deep and utilize the skills that you have in order to get the work done.” The advisor described his role as “providing students with the emotional support and skill building in order to be successful in the class.”

Another advisor made an effort to invite other faculty members to teach specific curriculum units to her advisory. She believed that introducing her students to different teaching styles helped them when they were enrolled in a dual enrollment class. The researcher asked how the advisor determined if this approach made a difference, and she said that students reported that although it was still hard getting used to a new teacher, having been taught by another advisor did help to prepare them.

Observation data supporting final finding

Table 13  Advisor Support Theme: Observation of Student-Advisor Meeting and Exhibition

<table>
<thead>
<tr>
<th>Student</th>
<th>Advisor</th>
<th>One-on-One Meeting with Advisor</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Junior</td>
<td>Mikala</td>
<td>Student talks about her grades in the DE class and says that she is getting a B. Mikala tells her that a B is During Q and A advisor prompts the student to mention points she should stress.</td>
<td></td>
</tr>
</tbody>
</table>
Faculty advisor support of the students was focused on their dual enrollment experiences. Juniors needed support and confidence building since these were the first dual enrollment classes they were taking. The seniors had taken at least two college courses in their junior years and understood the expectations of the classes.
The advisors used the one-on-one meetings to discuss student concerns and offer direction. The meetings were guided by the students’ goals in the learning plans.

The exhibition was a culminating activity at the end of each quarter. Discussion of the plan for the exhibition took place with the advisor during the individual student-advisor meetings. Students demonstrated knowledge of the goals in their learning plan and how the goals connected to their real world experiences.

The observation of the faculty advisor – student meetings and the exhibitions led the researcher to conclude that faculty advisor support during dual enrollment improved student confidence.

**Faculty-student relationship theme**

*Final Findings*

5. College faculty-student relationships developed as a result of student confidence gained during dual enrollment.

6. College faculty-student relationships developed as a result of students’ experience with 4-year faculty advisor model.

**Interview data supporting final finding**

**Table 14 Faculty–Student Relationship Theme: Interview Questions and Excerpts from Responses**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interview Questions</th>
<th>Excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>College students</td>
<td>1. Are you in contact with your high school advisor?</td>
<td>“I was during my first year in college. Then I felt that he had a lot of his own high school students to help.”</td>
</tr>
<tr>
<td></td>
<td>2. Give an example of when you would contact her/him.</td>
<td>“She said that we could contact her at any time. I have, but now just knowing that she’s there is enough.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>”I see him when I go back</td>
</tr>
</tbody>
</table>
3. Do you access college advisors and faculty for assistance?

<table>
<thead>
<tr>
<th>Student</th>
<th>Advisor</th>
<th>One-on-One Meeting with Advisor</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Junior</td>
<td>Mikala</td>
<td>Student A had been with the advisor for three years. She was still challenged by not using first names for faculty at the college.</td>
<td>Student did not reference the college professor during the exhibition.</td>
</tr>
<tr>
<td>B- Junior</td>
<td>Mikala</td>
<td>Student B had been with the advisor for three years. He was still challenged by</td>
<td>Student did not reference the college professor during the exhibition.</td>
</tr>
</tbody>
</table>

Faculty-student relationships at the career and technical high school developed over a four-year period. The advisor model supported faculty-student relationship development, which led to an ease of interaction between students and faculty.

Faculty advisors supported students by encouraging student self-advocacy with dual enrollment professors.

Observation data supporting final finding

Table 15 Faculty – Student Relationship Theme: Observation of Student-Advisor Meeting and Exhibition
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>C- Junior</td>
<td>Mikala</td>
<td>Student C had been with the advisor for three years.</td>
<td>Student stated that the professor was interesting and she felt comfortable in class.</td>
</tr>
<tr>
<td>D - Senior</td>
<td>Mitch</td>
<td>Student D had been with the advisor for four years. She stated that her experience interacting with her advisor and mentor helped in working with college faculty.</td>
<td>The final exhibition was held at the college. The dual enrollment professor was in attendance.</td>
</tr>
<tr>
<td>E - Senior</td>
<td>Sara</td>
<td>Student E had been with the advisor for four years. Her previous experience in DE classes gave her confidence in interacting with college faculty.</td>
<td>Student E referenced faculty-student interaction when she talked about “my professor.”</td>
</tr>
</tbody>
</table>

Faculty-student relationships appeared to develop as a result of experience. Seniors had taken more than two dual enrollment classes and felt confidence in interacting with professors. Also mentioned was the experience gained by interacting with advisors and mentors over a period of four years that transferred to an ease of interaction with the college faculty members.

The juniors were taking college classes for the first time and were still unsure of how to approach the college faculty.

The finding from the observation revealed that college faculty-student relationships developed as a result of student confidence gained through dual enrollment.

**The Learning Plan Theme**
Final Finding

7. Faculty advisor -student interaction led to an understanding of commitment to goals through the use of the Learning Plan

Interview data supporting final finding

Table 16 The Learning Plan Theme: Interview Questions, and Excerpts from Responses

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interview Question</th>
<th>Excerpt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty advisors</td>
<td>1. How often do you meet with your students regarding their progress in DE classes? 2. How do you utilize the Learning Plan?</td>
<td>“I meet with all my students weekly for a half-hour. With DE students I focus on their syllabus and goals. We also use the time to plan for their quarterly exhibition.” “The Learning Plan is very important as far as helping the students adhere to the goals they agreed to in the Plan. The Learning Plan helps them manage their time and stay on track. It is the center of the one-on-one discussion.”</td>
</tr>
</tbody>
</table>

Faculty advisors and students referenced the learning plan as being an important guide in setting and adhering to goals. Advisors reported that the objective of the Plan was to teach students to be independent in the process of organizing their work and being responsible for meeting their goals. One advisor viewed the one-on-one meeting with students and the learning plan as an opportunity for students’ self-discovery, provoking them to think deeper and become more self-sufficient.

The dual enrollment coordinator believed that students who had an understanding of the relationship between their college courses and the learning plans succeed. She
referred the organizational skills needed to balance college and high school work and management of time and how the learning plan keeps a student focused on the goals.

Observation data supporting the final finding

Table 17  The Learning Plan Theme: Observation of Student –Advisor Meeting and Exhibition

<table>
<thead>
<tr>
<th>Student</th>
<th>Advisor</th>
<th>One-on-One Meeting with Advisor</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Junior</td>
<td>Mikala</td>
<td>Learning plan used to discuss college class goals and progress. Student needs to update learning plan. Mikala reviews with her what she needs to put in her updated learning plan.</td>
<td>Student distributed learning plan to exhibition evaluators. Student explained that her exhibition would follow the topics in the learning plan.</td>
</tr>
<tr>
<td>B - Junior</td>
<td>Mikala</td>
<td>Advisor addressed the student’s lack of interest in the DE course and focused on how the learning plan goals can reflect a positive approach to the situation.</td>
<td>Student distributed learning plan to exhibition evaluators. Student explained that his exhibition would follow the topics in the learning plan.</td>
</tr>
<tr>
<td>C- Junior</td>
<td>Mikala</td>
<td>Student C discussed a goal for her business plan, which she incorporated into her learning plan.</td>
<td>Student distributed learning plan to exhibition evaluators. Stressed that exhibition would be guided by the goals.</td>
</tr>
<tr>
<td>D- Senior</td>
<td>Mitch</td>
<td>Senior D portrayed a sense of independence in setting her own goals. The student-faculty advisor interaction depended less on visually following the learning plan than discussing present and future goals.</td>
<td>Student distributed learning plan along with web links to her topic.</td>
</tr>
</tbody>
</table>
E- Senior  Sara  The focus of the one-on-one discussion was the final senior exhibition. The learning plan was used to guide the discussion when addressing goals.  Student used power point to review goals and connect to the learning plan.

The faculty advisors and students centered the one-on-one conversation on the goals outlined in the learning plan.

Juniors and seniors were consistent in referencing and distributing the learning plan during the exhibition. It was evident that the learning plan was important in identifying and discussing implementation of the students’ goals for the academic quarter preceding the exhibition.

Observations supported the finding that faculty advisor-student interaction led to an understanding of commitment to goals through the use of the Learning Plans.

**Student Motivation Theme**

*Final Finding*

8. Student motivation and confidence were positively impacted by dual enrollment.

**Interview data supporting final finding**

**Table 18 Student Motivation Theme: Interview Questions and Excerpts from Responses**

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interview Question</th>
<th>Excerpt</th>
</tr>
</thead>
</table>
| Faculty advisors    | 1. Based on your experience what would you say are the strengths of the DE partnership? | “For the most part they were even more excited and motivated about the college process; it isn’t so daunting. Going in a class and being with older students gives them the experience when they go to college. They can...
Motivation and confidence were linked to dual enrollment and identified as strengths of the dual enrollment program. Faculty advisors reported students feeling special and smart when taking a college class. They reported increased motivation. There was consistency in the responses regarding the positive change in motivation. It was not uncommon to hear faculty advisors and critical friends state, ”definitely” and “absolutely”, there was a positive change in motivation. One faculty advisor observed that, “students take those classes seriously. That level of seriousness transfers into everything; it ups their game. “ When interviewing the school principal he observed:

Once they (students) start to come and go they come in like a different student. There is a focus in the air and it rubs off on the other students. There is more expected of them and they are rising to the challenge. They also are more adult-like because adults surround them. A. Baraf, Principal (Interview March 2012)

Faculty advisors observed that the dual enrollment program increased the students’ sense of excitement about the college process. “It isn’t so daunting. Going into a class and being with older students gives them the experience when they go to college. They can be professional and mature.” Evidence of motivation was described as a positive change in
the students’ psyche because “college has a stigma as being the grown-up thing.” When students received As and Bs in the courses their confidence was reinforced.

**Observation data supporting final finding**

**Table 19 Student Motivation Theme: Observation of Student-Advisor Meeting and Exhibition**

<table>
<thead>
<tr>
<th>Student</th>
<th>Advisor</th>
<th>One-on-One meeting with Advisor</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A- Junior</td>
<td>Mikala</td>
<td>Student discusses the DE class and said that she is working hard for a good grade so her financial aid would not be jeopardized when she goes to college.</td>
<td>Student took pride in her exhibition and responded positively to constructive feedback.</td>
</tr>
<tr>
<td>B - Junior</td>
<td>Mikala</td>
<td>Student receives a B on a mid-term exam. His response is positive.</td>
<td>Progress in DE impacted his approach to organizing work for his exhibition.</td>
</tr>
<tr>
<td>C- Junior</td>
<td>Mikala</td>
<td>Student’s business and sales prospects encourage her to develop her business plan.</td>
<td>Student’s focus is on her business plan. She discusses interest in taking a DE business course if one is offered.</td>
</tr>
<tr>
<td>D – Senior</td>
<td>Mitch</td>
<td>Student D tells the advisor that she would like to discuss her college research paper. She is having difficulty finding references and Mitch directs her to several research engines.</td>
<td>According to the advisor Student D is motivated to excel. Her exhibition demonstrates her commitment to excellence.</td>
</tr>
<tr>
<td>E – Senior</td>
<td>Sara</td>
<td>Advisor encourages</td>
<td></td>
</tr>
</tbody>
</table>
Students talked about their motivation to succeed and how the repeated experience of going to class eased their anxiety. Passing grades were a motivator for students. The expectation was that they would receive college credit for the classes and needed at least a B to be eligible for future dual enrollment classes. Observation of the one-on-one advisor meetings and exhibitions indicated that student motivation and confidence were positively impacted by dual enrollment.

**Triangulation of the Data**

The researcher compared the findings of the three methods of data collection categorized by themes. The methods used to collect the data were the dual enrollment grade and credit documents for Spring 2008-Spring 2010, the interviews of faculty advisors and college sophomores, the observation of advisor one-on-one meetings, and the student exhibitions. The final findings were a result of comparing the collective findings under each theme.
### Table 20 Triangulation of three methods of data collection

<table>
<thead>
<tr>
<th>THEME</th>
<th>DOCUMENT FINDINGS</th>
<th>INTERVIEW FINDINGS</th>
<th>OBSERVATION FINDINGS</th>
<th>FINAL FINDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual enrollment partnership</td>
<td>1. Approximately 92% of career and technical high school students received college credits between 2008-2010.</td>
<td>1. Dual enrollment partnership commitment was a positive experience.</td>
<td>1. Dual enrollment partnership commitment was a positive experience.</td>
<td>1. Dual enrollment partnership commitment was a positive experience.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Dual enrollment in-class interaction with college students aided in their transition to college.</td>
<td></td>
<td>2. Dual enrollment in-class interaction with college students aided in their transition to college.</td>
</tr>
<tr>
<td>Learning plan</td>
<td>1. Approximately 92% of career and technical high school students received college credits between 2008-2010.</td>
<td>1. Faculty advisor - student interaction led to an understanding of commitment to goals through the use of the learning plan.</td>
<td>1. Faculty advisor - student interaction led to an understanding of commitment to goals through the use of the learning plan.</td>
<td>1. Faculty advisor - student interaction led to an understanding of commitment to goals through the use of the learning plan.</td>
</tr>
<tr>
<td>Advisor support</td>
<td>1. Approximately 92% of career and technical high school students received college credits between 2008-2010.</td>
<td>1. Faculty advisor support during DE gave students confidence to approach college faculty.</td>
<td>1. Faculty advisor support during DE improved student confidence.</td>
<td>1. Faculty advisor support during DE improved student confidence.</td>
</tr>
<tr>
<td>Student motivation</td>
<td>1. Approximately 92% of career</td>
<td>1. Student motivation and</td>
<td>1. Student motivation and</td>
<td>1. Student motivation and</td>
</tr>
</tbody>
</table>
and technical high school students received college credits between 2008-2010.

Faculty-student relationship

1. Approximately 92% of career and technical high school students received college credits between 2008-2010.

1. College faculty-student relationships developed as a result of student confidence gained during DE.
2. College faculty-student relationships developed as a result of students’ experience with 4-year faculty advisor model.

Research Questions and Final Findings

The research questions that guided this case study were: (1) How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? (2) How do dual enrollment students enrolled in sophomore year in college perceive the support they received from high school/college advisors? The analysis of data collected from interviews, observations, and dual enrollment credit data revealed eight findings.

The connection of the final findings to the research questions is outlined in Table 21. The findings answer the research questions that guided the study.
<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Final Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are DE partnerships with support from HS faculty advisors perceived to affect college retention for enrolled students?</td>
<td>1. Student motivation and confidence were positively influenced by advising of dual enrollment students.</td>
</tr>
<tr>
<td></td>
<td>2. Dual enrollment partnership commitment was a positive experience.</td>
</tr>
<tr>
<td></td>
<td>3. Dual enrollment students’ in-class interaction with college students aided in their transition to college.</td>
</tr>
<tr>
<td></td>
<td>4. College faculty-student relationships developed as a result of student confidence gained during dual enrollment.</td>
</tr>
<tr>
<td></td>
<td>5. Approximately 92% of career and technical high school students received college credits between 2008-2010.</td>
</tr>
<tr>
<td>2. How do DE students enrolled in sophomore year in college perceive the support they received from high school/college advisors?</td>
<td>6. The college students indicated that the pre-college experience of dual enrollment and faculty advisor-student interaction led to an understanding of commitment to goals through the use of the learning plan.</td>
</tr>
<tr>
<td></td>
<td>7. Faculty advisor support during dual enrollment gave students confidence to approach college faculty.</td>
</tr>
<tr>
<td></td>
<td>8. College faculty-student relationships developed as a result of students’ experience with the four-year faculty.</td>
</tr>
</tbody>
</table>
Theoretical Logic Model and Application of Findings

The goal of this qualitative, descriptive single case study was to describe the perception of the influence of a high school/community college dual enrollment partnership and high school advising program on student persistence to the second semester of the sophomore year in college. The research questions guiding the study were: 1) How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? 2) How do former dual enrollment students enrolled in the sophomore year in college perceive the support they received from the high school advisors? The questions examined if there was a relationship between the advising process in the dual enrollment program and a student’s persistence to the second semester of the sophomore year in college.

Vincent Tinto’s theory of student departure and Alexander Astin’s theory of student integration provided the lenses through which to examine the problem of student retention in college. Vincent Tinto’s theory of departure is predicated on the research finding that students leave college because they are lacking the support mechanisms that guide them through a positive college experience (Tinto, 1987). Alexander Astin's theory of involvement suggests that students learn more the more they are involved in both the academic and social aspects of the college experience (Astin, 1984, p.292).

Ernest Pascarella and Patrick Terenzini leant support to the theories of Tinto and Astin through their work on the impact of student advising and patterns of relationships between student-faculty interactions outside the classroom and the effects on freshman year retention.
The researcher combined the theoretical models of Vincent Tinto, Alexander Astin, Ernest Pascarella and Patrick Teranzini in order to display the progression from pre-college experience to college persistence. The researcher applied the findings from the study to each stage of the model. Figure 11 is the theoretical logic model that was the result of the combined theories.

![Theoretical Logic Model](image-url)

**Figure 10 Theoretical Logic Model**
According to Vincent Tinto, students begin their college careers with pre-college experiences and attributes. These experiences influence students’ commitments to educational goals. Alexander Astin in his theory of student involvement defines student inputs as the talents, skills, aspirations and other potentials for growth and learning that the new student brings with her/him to college (Astin, 1970, p. 3). Figure 11 focuses on the progression of a student’s college path following his/her pre-college experience of dual enrollment and faculty advisor support at the career and technical high school.

**Pre-College Experience**

The findings from the study indicated that the pre-college experience of a dual enrollment partnership commitment was a positive experience for students at the career and technical high school. Students were successful in the college courses, earning college credits that transferred to a two or four year college. Evidence of this finding was supported by interviews with faculty advisors, critical friends, college sophomores, and observations.

The findings also revealed that faculty advisor support during dual enrollment improved student confidence. The college sophomores indicated that the dual enrollment experience and advisor support gave them a foundation when they entered college that eased their transition. Supporting this finding were the observations of faculty advisor-student interactions and interview responses by study participants.

**Goal Commitment**

The effect of the pre-college experience was the students’ understanding of a commitment to academic goals through the use of the learning plan. According to
Vincent Tinto (1982) student goal commitment and institutional commitment are important factors in student departure.

The learning plan was referenced by faculty advisors and students as being an important guide in setting and adhering to goals. The plan is a process for students to become actively involved “in the mapping, assessment, and reflection required when developing current and future academic, career, and personal/social goals” (State Department Of Education, 2009, p. 1). Interviews with college sophomores indicated that the transference of skills developed through the use of the learning plan aided in their understanding of the importance of goal setting and commitment in college.

**Institutional Commitment**

Institutional commitment to student engagement was enhanced through partnership collaboration between the high school and community college. The finding that the dual enrollment partnership commitment was a positive experience also impacted student motivation and confidence. College acceptance of dual enrollment credits leant further support to the partnership agreement and institutional commitment.

A study by ACT Inc. (2008) found that institutional commitment is a strong indicator of college retention. The study supports Vincent Tinto’s findings that student goal commitment and institutional commitment are important factors in student departure.

**Faculty-student Interactions**

Tinto’s model of persistence (Pacific Policy Research Center, 2010, p. 30) progresses from goal and institutional commitment to a students’ academic and social experience within the institution. According to Ernest Pascarella and Patrick Teranzini
students who are the happiest and academically the most successful have developed a solid relationship with an academic advisor, a faculty member, or an administrator who can help them (Pascarella & Terenzini, 1978). The findings from the case study revealed that: 1) College faculty-student relationships developed as a result of student confidence gained through dual enrollment 2) College faculty-student relationships developed as a result of students’ experience with the four-year faculty advisor model.

Relationship development with college faculty was learned during dual enrollment and guided by high school faculty advisors. Advisors encouraged students to ask questions in class, email professors and schedule appointments. Students interviewed for the study elaborated on the support they received while taking dual enrollment classes and how that support encouraged them to access college advisors and faculty for assistance.

According to the college sophomores the faculty advisor model at the career and technical high school offered a support that they hoped to replicate in college. Three of the students enrolled in programs that provided weekly access to an advisor support group. Other students joined campus clubs that offered social support and contact with a faculty advisor.

The findings that college faculty – student relationships developed as a result of students’ experience with the four-year high school faculty advisor model and student confidence gained through dual enrollment are supported by Vincent Tinto’s model of persistence. Tinto includes engagement with faculty members as a necessary social and academic experience needed for a student to achieve academic and social integration in order to persist to degree attainment (Tinto, 1993, p.101).
Academic and Social Integration

Academic and social integration is the condition for student success that guided this research in determining if the high school/community college dual enrollment partnership supported by the high school faculty advisor program, is perceived to influence college retention through the first semester of the sophomore year in college. Tinto’s model of institutional departure is based on understanding the support systems that affect student success in college.

Vincent Tinto refers to academic integration as the degree to which new students accept and incorporate the academic norms of the college. (Tinto, 1994) Academic integration is based on the strength of the individual student’s academic expectations, goals and motivation. Social integration is based on the degree to which students become engaged with the social life of the college (Tinto, 1993, p.101).

The findings from the study demonstrated that the college sophomores’ motivation and confidence were positively impacted by dual enrollment. The study also found that the students had an understanding of goal commitment through the use of the high school learning plan. The findings support Tinto’s reference (1993) to academic integration based on the strength of the individual student’s academic expectations, goals and motivation (1993, p. 101).

Student integration is considered an important aspect in Alexander Astin’s theory of student involvement. He describes a highly involved student as “one who devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (Astin, 1999, p. 518). Findings from the study indicated that students who participated in
the dual enrollment program brought experience of interacting with faculty and peers in a college setting.

The finding that dual enrollment students’ in-class interaction with college students aided in their transition to college is supported by Joni Swanson’s investigation on the impact of socializing on campus. According to Swanson’s study the impact of socializing on campus prior to enrolling in college, suggests that students who have a positive dual enrollment experience may have an added degree of confidence in their ability to handle college level work (Swanson, 2010).

**Effect of Academic and Social Integration**

The result of the progression of the theoretical logic model from the pre-college experience to academic and social integration is the persistence of students to the second semester of the sophomore year in college. The findings from the study indicated that the college sophomores were supported through the dual enrollment program and high school faculty advisor support. College sophomores interviewed for the study identified their dual enrollment experience and faculty advisor support as instrumental in easing their transition to college.

Ernest Pascarella and Patrick Terenzini support the foundation for the research thesis that the influence of dual enrollment and high school advising influences student persistence in college. They suggest that, regardless of institutional type or the composition of the student body, solid academic advising can influence student persistence (Pascarella & Terenzini, 1977, p. 542)

**Summary of Findings**

The purpose of this qualitative, descriptive single case study was to determine how a high school/ community college dual enrollment partnership and high school
advising program was perceived to influence student persistence to the second semester of the sophomore year in college. The findings revealed that the attributes and qualities of the advisory program make it successful in supporting students, which is perceived to lead to persistence in college. The findings also point to the importance of the advising program in encouraging student motivation and confidence, themes that emerged during the research analysis.

Chapter 5, the final chapter of this thesis, will provide a summary of the findings supported by theoretical analysis, the literature review, implications for practice and recommendations for future research.
CHAPTER V SUMMARY, DISCUSSION AND IMPLICATIONS

Discussion of Findings and Implications for Practice

The research questions guiding this qualitative, descriptive single case study were: 1) How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students? 2) How do former dual enrollment students enrolled in the sophomore year in college perceive the support they received from the high school advisors? The questions examined if there was a relationship between the advising process in the dual enrollment program and a student’s persistence to the second semester of the sophomore year in college.

Chapter Five focuses on the implications of the findings for the career and technical high school, the state dual enrollment program and the problem of practice, which is, the decline in the college retention rate in the United States, especially among African-American and Hispanic students. The chapter also describes the link between the findings and the research from the literature and theories of Alexander Astin (1975), Vincent Tinto (1993), Ernest Pascarella and Patrick Terranzini (2001).

A program logic model was used to demonstrate how the resources, a faculty advisor program and the dual enrollment program, were expected to influence the intermediate outcome, which was persistence to the second semester of the sophomore year in college. A logic model depicting the application of the theories of Astin, Tinto, Pascarella and Terranzini was used to connect the findings from the study to the step-by-step theoretical process that led to sophomore student persistence.
The findings are categorized under five themes: dual enrollment partnership, faculty-student relationships, advisor support, student motivation, and the learning plan.

Analysis of the case study findings revealed:

Dual Enrollment Partnership

1. Dual enrollment partnership commitment was a positive experience.
2. Approximately 92% of career and technical high school students received college credits between 2008-2010.
3. Dual enrollment students’ in-class interaction with college students aided in their transition to college.

Faculty-Student Relationship

4. College faculty-student relationships developed as a result of student confidence gained through dual enrollment.
5. College faculty-student relationships developed as a result of students’ experience with the four-year high school faculty advisor model.

Advisor Support

6. The college sophomores indicated that the support of faculty advisors in encouraging student self-advocacy with dual enrollment professors had a positive impact on the college experience.

Student Motivation

7. Student motivation and confidence were positively impacted by dual enrollment.

Learning Plan

8. The college students indicated that the pre-college experience of dual enrollment and faculty advisor-student interaction led to an understanding of commitment to
goals through the use of the learning plan during their four years at the career and technical high school.

The findings revealed that dual enrollment and faculty advisor support are pre-college experiences that result in supporting the theories of Vincent Tinto, Alexander Astin and Ernest Pascarella and Patrick Terenzini regarding student persistence in college. Vincent Tinto and Alexander Astin determined through their research that if a student begins a college career with pre-college experiences and attributes these experiences influence a student’s commitment to educational goals in college. Throughout the study faculty advisors, college students and critical friends were very supportive of a dual enrollment program and the impact that the program had on student motivation, confidence and familiarizing students with college.

The college students’ responses to the questions on faculty advisor support attributed their experience interacting with high school faculty advisors as an influence in developing relationships with faculty in college. Ernest Pascarella and Patrick Terranzini determined through their research that students who are the happiest and academically the most successful have developed a solid relationship with an academic advisor, a faculty member, or an administrator who can help them (Pascarella & Terenzini, 1978).

**Dual Enrollment Partnership**

Three important findings emerged in reference to the theme of dual enrollment partnerships.

Findings:

1. Dual enrollment partnership commitment was a positive experience.
2. Approximately 92% of career and technical high school students received college credits between 2008-2010

3. Dual enrollment students’ in-class interaction with college students aided in their transition to college.

The findings lend support to the need for offering dual enrollment as an option for students interested in taking college courses while in high school. The results of the findings indicate that dual enrollment is a positive experience. The research conducted by Karp, Calcagno, Hughes, Jeong, & Bailey (2007) on the postsecondary achievements of students in dual enrollment, indicate that students entering the college environment with experience in a college classroom, peer associations and familiarity with faculty/student support, are more likely to transition and integrate into the college setting (p. 65).

**Theoretical Framework**

Dual enrollment is a pre-college experience, which reflects the theories of Vincent Tinto (1993) and Alexander Astin (1997) that positive student pre-entry attributes lead to greater student integration and thus persistence. The theoretically predicted results of the impact of a positive pre-college experience are aligned with the progression of the college student participants’ college path following his/her pre-college experience of dual enrollment and faculty advisor support at the career and technical high school.

9. The college sophomores participating in the study entered college having experienced college life and faculty advisor support while experiencing college. They attended classes on a college campus, interacted with college students, and became familiar with college expectations and work. Interviews with the students indicated that the transition to college was much smoother having
taken college classes in advance of enrolling in college.

The findings from the study demonstrated that the college sophomores’ motivation and confidence were positively impacted by dual enrollment. The study also found that the students had an understanding of goal commitment through the use of the high school learning plan. According to Vincent Tinto (1982) student goal commitment and institutional commitment are important factors in student departure.

Tinto’s model of persistence (Pacific Policy Research Center, 2010, p. 30) progresses from goal and institutional commitment to a students’ academic and social experience within the institution. According to Vincent Tinto college social involvement includes engagements with faculty members outside the classroom and forming new friendships with other college students (Tinto, 1993, p. 101).

Student integration is considered an important aspect in Alexander Astin’s theory of student involvement. He describes a highly involved student as “one who devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students” (Astin, 1999, p. 518). Findings from the study indicated that students who participated in the dual enrollment program brought experience of interacting with faculty and peers in a college setting.

The result of the progression of the theoretical logic model from the pre-college experience to academic and social integration is the persistence of students to the second semester of the sophomore year in college.
Literature

The review of the literature indicated that enrollment in a dual enrollment program and accumulating college credits, defines the student’s intention to attend a postsecondary institution (Bailey, 2007). The findings from the case study revealed that approximately 92% of career and technical high school students received college credits between 2008-2010. The students were enrolled in college courses at the community college. The data listing the students, courses, grades and credits earned from dual enrollment during the Spring 2008- Spring 2010 was collected from the career and technical high school. The researcher sorted the data by semester and calculated the number of students who were enrolled in dual enrollment courses each semester. Based on the semester credit data recorded for each student, the researcher determined that approximately 92% of the students received college credits.

The profile of the seven college students interviewed for the study showed that students transferred as many as 36 credits upon entering college. The significance of this finding is the opportunity for students to begin college with previous college experience and earned college credits. In a study by Carla Pfiel (Pfeil, 2009) dual enrollment was viewed as an opportunity where students could save money and have a head start.

Peer relationship development was also an outcome of dual enrollment participation. The college sophomores commented on the benefit of interacting with college students during dual enrollment and how the experience eased their transition to college. Dual enrollment students partnered with college students for academic work that aided in social integration. College sophomores reported that familiarity with adult
students prior to college matriculation eliminated the anxiety of interacting with older students. Bailey, Hughes and Karp’s study on the role of dual enrollment in easing the transition to college supports the experience of the college sophomores (2002). Researchers found that dual enrollment could serve as a demystifying experience for students and ease the psychological transition to college (p.2).

**Implications for Practice**

Dual enrollment partnerships were identified as one program that has been successful in aiding students in transitioning to college. Low-income students benefited from the high school/college partnership in accumulating early college credits. Credit transfer to four-year colleges has the potential to reduce time to degree. Referenced studies (Hoffman, Vargas, & Santos, 2008; Karp, Calcagno, Hughes, Jeong, and Bailey, 2007; Pfeil, 2009) from the literature support the findings that dual enrollment has been influential in students’ college transition and likelihood to persist in college.

Dual enrollment is a program that should be instituted as a state policy and supported by state funding. Dual enrollment programs in the state that is the site of this study are not aligned with the high school -postsecondary framework of the Diploma System nor are the programs written into educational policy ((Jobs For The Future, 2006, p. 2). The findings from this case study indicate that dual enrollment is a viable program that merits inclusion in state educational policy.

**Implications for Future Research**

The research for this case study focused on the influence of dual enrollment participation with high school advising support on students’ persistence to the second semester of the sophomore year in college. While the findings support the influence of
dual enrollment, further investigation into other indicators of student departure would
benefit the educational community in understanding why students leave college before
degree completion. The following question warrants further research:

1. How does dual enrollment measure against other factors, such as parent involvement,
   and college financing in influencing college persistence?

The findings from further research would lend support to the existing body of literature
on dual enrollment.

**Faculty-Student Relationship**

Two important findings emerged in reference to the theme of dual enrollment

Findings

4. College faculty-student relationships developed as a result of student confidence
   gained through dual enrollment.

5. College faculty-student relationships developed as a result of students’ experience
   with the four-year high school faculty advisor model.

**Theoretical Framework**

According to Ernest Pascarella and Patrick Terenzini students who are the happiest
and academically the most successful have developed a solid relationship with an
academic advisor, a faculty member, or an administrator who can help them (Pascarella
& Terenzini, 1978). Relationship development with college faculty was attained during
dual enrollment and guided by high school faculty advisors. Advisors encouraged
students to ask questions in class, email professors and schedule appointments. Students
interviewed for the study elaborated on the support they received while taking dual
enrollment classes and how that support encouraged them to access college advisors and faculty for assistance.

According to the college sophomores, the faculty advisor model at the career and technical high school offered a support that they hoped to replicate in college. Three of the students enrolled in programs that provided weekly access to an advisor support group. Other students joined campus clubs that offered social support and contact with a faculty advisor.

The findings that college faculty – student relationships developed as a result of students’ experience with the four-year high school faculty advisor model and student confidence gained through dual enrollment are supported by Vincent Tinto’s model of persistence. Tinto includes engagement with faculty members as a necessary social and academic experience needed for a student to achieve academic and social integration in order to persist to degree attainment (Tinto, 1993, p.101).

Further support is found in the theory of Alexander Astin who attributes frequent interaction with faculty as more strongly related to satisfaction with college than any other type of involvement (Astin, 1984).

**Literature**

Faculty-student relationship development is central to how students come to understand the connections between what they are learning and the overall purpose of their academic programs (Hemwall, 2008,p. 254). The college sophomores attributed the development of faculty relationships to their experiences with their high school faculty advisor and the confidence gained by participating in the dual enrollment program. In selecting a college, the students looked for an academic program that would have the
same faculty advisor connection that they experienced at the career and technical high school.

The results of the Survey of Entering Student Engagement (SENSE) 2009, an initiative of the Center for Community College Student Engagement, indicate that one common element in student persistence was a student’s early connection to someone at the college, such as a professor, administrator or advisor (Oriano-darnall, 2010). The participants in this study confirmed this finding in their interview responses when discussing the importance of programs that offered frequent faculty-student engagement.

**Implications for Practice**

The pre-college experience of dual enrollment involvement afforded students the opportunity to experience college life prior to matriculation. Students were exposed to the college campus, classroom, curriculum, and interaction with college students and faculty. Knowledge of expectations eased their transition to college eliminating pre-entry anxiety. Outreach to college faculty during dual enrollment was a process that eased with experience.

The college students participating in the study were identified as members of an underserved population. In an ACT study researchers found that African Americans and Hispanics are less likely to attend and complete college than Caucasian students (Lotkowski, Robbins, & Noeth, 2004). The student participants persisted to the second semester of sophomore year in college and gained confidence to engage with faculty and interact in the college classroom. The dual enrollment partnership was committed to student success in college. According to Vincent Tinto (2005) the commitment of the college or university to student success for low income and underrepresented students
will influence persistence by shaping students’ sense of belonging (p. 12).

The implication of the finding that college faculty-student relationships developed as a result of student confidence gained through dual enrollment further supports the impact of dual enrollment on college persistence.

**Implications for Future Research**

The findings focused on the influence of dual enrollment and high school advisor support on students’ developing relationships with college faculty. Future research on the collaboration between high school faculty advisors and college faculty would enhance dual enrollment partnership development.

**Advisor Support**

The finding that emerged from the theme advisor support is significant in the connection to student self-advocacy and faculty-student relationships.

**Findings**

6. The college sophomores indicated that the support of faculty advisors in encouraging student self-advocacy with dual enrollment professors had a positive impact on the college experience.

**Theoretical Framework**

Advisor support of the college sophomores during high school emerged as a pre-college experience that aided in their transition to college. Tinto’s theory on student departure begins by focusing on the characteristics of the pre-college experience of the students transitioning to college. Tinto’s model of institutional departure is based on understanding the support systems that affect student success in college (1987). Advisor
support of the dual enrollment students at the career and technical high school was demonstrated through:

- One-on-one meetings with students,
- Learning plan goal incorporation,
- Homework and assignment support for dual enrollment,
- Skills learned through advisories at the high school,
- Presentation skills through exhibitions, and
- Project organization

Advisors discussed their philosophy of advising when being interviewed. They focused on giving the students the tools to advocate for themselves. Student problem solving and self-advocacy were skills that advisors incorporated into their weekly one-on-one meetings with dual enrollment students.

**Literature**

The findings from this study supported much of the literature on advisor support and academic achievement. Larry McClure et.al. studied the importance of personalization—improved, trusting relationships among teachers and students—in raising student expectations for themselves (McClure, Yonezawa, & Jones, 2010). The researchers found that students who reported having trusting relationships with teachers did better academically (p. 10). The dual enrollment students at the career and technical high school like the students in the McClure et.al. study, attributed the support received from faculty advisors to their success in dual enrollment classes.
The study by McClure et. al. supports the New England Association of Schools and Colleges (NEASC) Standard on School Culture and Leadership (New England Association Of Schools And Colleges Board Of Trustees, 2009) which states:

There shall be a formal, ongoing program through which each student has an adult in the school, in addition to the school counselor, who knows the student well and assists the student in achieving the school’s 21st century learning expectations (Indicator 3).

An indication that the standard is being implemented is evidence that the school program is “fostering personalization and assigning each student an advisor/advocate or mentor” (Standard 5, Indicator 3). The dual enrollment students at the career and technical high school remain with the same advisor for four years. The support gained through personalization of a student’s academic experience during dual enrollment led to ability to self-advocate with college professors, which had a positive impact on the college experience.

**Implications for Practice**

The advisor model at the career and technical high school has been in existence since 1996 when the school was founded. Faculty advisors are the center of the program. They both teach and advise students in their advisories during the students’ four-year stay at the high school. The findings support the anticipated result that faculty advisors personalize their interactions with high school students during the one-on-one weekly meetings. The personalization of interactions between faculty advisor and student and the positive impact on college transition, supports the intellectual goal of the study, which was to lend support to a formal program of high school advising proposed by the New England Association of Schools and Colleges (2009) in order “to assist students in achieving a school’s 21st century learning expectations” (p.5).
Implications for Future Research

The advent of secondary school advising emerged during the educational reform movement of the 1980s (Essential Things, 2012). Considering that advisories have been in existence for thirty years, the studies that exist on the effectiveness of high school advising on student achievement are minimal. There is a need for further research addressing the questions

- How does high school advising impact student academic achievement?
- What is the relationship of high school advising to student success in high school?

Student Motivation

The theme student motivation produced an important finding.

7. Student motivation and confidence were positively impacted by dual enrollment.

Theoretical Framework

Vincent Tinto refers to academic integration as the degree to which new students accept and incorporate the academic norms of the college (Tinto, 1993). Academic integration is based on the strength of the individual student’s academic expectations, goals and motivation (p.101). The findings from the case study demonstrated that the college sophomores’ motivations and confidence levels were positively impacted by dual enrollment. According to faculty advisors and critical friends, the students’ pre-college experience in a college classroom increased motivation and confidence as the term progressed. College sophomores indicated that familiarity with the college classroom, curriculum and overall expectations increased confidence in their ability to handle college-level work.
In defining academic integration Tinto (1993) talks about the strength of a student’s motivation. The college sophomores referenced their inner drive as the foundation for motivation. The support from faculty advisors gave them the tools and guidance needed to succeed in the college courses.

Alexander Astin’s theory of student involvement references student motivation as an important aspect of involvement, but student behavior is critical (Astin, 1999). Astin describes an involved student as one who devotes considerable energy to studying, spends much time on campus, participates actively in student organizations, and interacts frequently with faculty members and other students (p. 518). The college sophomores’ participation in dual enrollment classes gave them the opportunity to experience the academic and collegial aspects of college life. Transference of the skills honed while taking dual enrollment classes aided in their integration into the college environment.

According to the college sophomores, they are socially engaged and academically confident in college as a result of dual enrollment and their internships. All of the students participate in on-campus clubs and organizations, and are comfortable interacting with faculty members.

The finding indicates that the students’ motivation and confidence were positively impacted by dual enrollment. Their persistence to the second semester of the sophomore year in college, level of comfort with college faculty, and involvement in campus organizations, lends support to Astin’s theory of student involvement.

**Literature**

The case study finding on the positive impact of dual enrollment on student motivation and confidence is a strong indicator in predicting college retention. The
findings from a study conducted by ACT indicated that non-academic factors of academic-related skills, academic self-confidence, academic goals, institutional commitment, social support, institutional selectivity, financial support, and social involvement all had a positive relationship with retention (Lotkowski, Robbins, & Noeth, 2004, p.vii). Interviews with faculty advisors, critical friends, college students and researcher observations supported the finding that student motivation and confidence were positively impacted by dual enrollment. According to faculty advisors, student achievement recorded in college course data from the Spring 2008-Spring 2010 contributed to student confidence and motivation. When given the opportunity, dual enrollment participation can make a positive difference in the way students feel about their ability to compete at a new level (Karp, Calcagno, Hughes, Jeong, & Bailey, 2007).

Further support of the case study finding is found in the research of Joni Swanson. Swanson researched the possible effects of socializing in a college environment while in high school and the impact on student confidence. Swanson’s study revealed that dual enrollment participation might play a significant role in persistence to degree (Swanson, 2008, p.3).

The study of dual enrollment and the positive relationship to a student’s self-motivation and confidence was a finding from the mixed-methods study by Carna Pfiel (Pfiel, 2009,p. 112). The qualitative portion of her study, which was interview based, supports the finding of this research that dual enrollment positively impacts student confidence and motivation.

**Implications for Practice**

Motivated and confident students were a result of the dual enrollment partnership
that afforded students the opportunity to take college courses while in high school. The consistent observations of the positive impact of dual enrollment on student motivation support the need for continued funding of the program. Comments by faculty advisors on the transference of motivation to students in the advisory who were not taking college courses is another indication as to the impact of the dual enrollment program.

The finding from the study and supporting literature should be included by the career and technical high school administration in advocating for continuation of the dual enrollment program.

**Implications for Future Research**

The impact of motivation and confidence on student achievement warrants further research on

- What studies exist on student motivation and how might the results be coupled with the findings from this study?

**Learning Plan**

One unexpected finding emerged in reference to the Learning Plan.

8. The college students indicated that the pre-college experience of dual enrollment and faculty advisor-student interaction led to an understanding of commitment to goals through the use of the learning plan during their four years at the career and technical high school.

**Theoretical Framework**

According to Vincent Tinto, student goal commitment and institutional commitment are important factors in student departure. Interviews with the college sophomores and observation of the individual interactions between advisor and student
revealed that the learning plan was an important guide in setting student goals. The effect of the pre-college experience was the students’ understanding of a commitment to academic goals and management of time through the use of the learning plan. Interviews with college sophomores indicated that the transference of skills developed through the use of the learning plan aided in their understanding of the importance of goal setting and commitment in college.

**Literature**

The New England Association of Schools and Colleges (2009) standards indicate that student advisors/advocates “serve as the prime facilitator of a personal learning plan for each student,” (p. 5). The advisor facilitating the learning plan at the career and technical high school has the support of the student’s learning plan team and fellow advisors.

Guidelines for The Individual Learning Plan (ILP) are an important component of the State Department of Education regulations that is the site of this study. The plan is a process for students to become actively involved “in the mapping, assessment, and reflection required when developing current and future academic, career, and personal/social goals” (Department Of Education, 2009, p. 1). ¹

College sophomores also stressed the importance of the learning plan in assisting with time management. Learning how to set goals and re-evaluate their progress helped them to meet deadlines. Richard Light’s (Light, 2001) ten- year study of students

¹ The specific state is being kept anonymous so as to keep the career and technical high school anonymous.
transitioning to college found that one important factor in a smooth transition was time management (p. 25).

Interviews with faculty advisors and college students, and researcher observations, indicate that the non-traditional career and technical high school has effectively implemented the individual learning plan guidelines outlined in the NEASC standards and state regulations. Transference of skills learned through the learning plan supported the college sophomores in their approach to time management when transitioning to college.

**Implications for Practice**

The use of the learning plan guided students in developing goals and managing time while in high school. Through the guidance of a learning team and faculty advisor facilitator the plan proved to be effective in aiding students when they transitioned to college.

The career and technical high school’s learning plan model with team and advisor oversight has transferable benefits for high schools implementing the Individual Learning Plan.

**Implications for Research**

Studies on the effective implementation of the NEASC standard and state regulation referencing the learning plan would benefit schools attempting to incorporate a workable learning plan into an advisory system. Future research on the benefits of the learning plan for all students transitioning to career or college would lend support to the regulations on the efficacy of the plan.
Conclusion

The problem investigated for this qualitative case study focused on the need for increasing the college completion rate in the United States and for more students to earn degrees in the next decade. The dual enrollment program with support from high school faculty advisors was studied in order to address the need. The connections and overlap between the themes and findings from the study are significant in supporting the anticipated outcome of dual enrollment participation and faculty advisor support as influential in supporting students in persisting to the second semester of the sophomore year in college.

The analysis of the data collected through interviews, observations and dual enrollment document review, revealed that the participants in the study strongly supported the dual enrollment program and faculty advisor model. The findings also revealed that the dual enrollment program with faculty advisor support increased student motivation and confidence, encouraged student self-advocacy with dual enrollment professors, led to faculty-student relationship development, aided in their interaction with college peers, and led to an understanding of the value of the learning plan in transferring a focus on goal commitment and time management skills to the college setting.

The theoretical logic model, which incorporated the theories of Vincent Tinto, Alexander Astin, Ernest Pascarella and Patrick Terenzini, was used to display the progression of the findings from pre-college experience to college persistence. The foundation from which the findings emerged was the pre-college experience of dual enrollment and faculty advisor support. Astin and Tinto both stress the importance of the
pre-college experience, which along with institutional commitment supports the anticipated finding that dual enrollment partnerships with support from high school faculty advisors affected college retention for enrolled students.

The career and technical high school would benefit from this study by using the results to support the need for continued funding of the dual enrollment program. The positive results of dual enrollment involvement: motivated and confident students, student accumulation of college credits, ease of transition to college, and faculty-student relationship development are indicators of student persistence in college. Dual enrollment is a program that should be instituted as a state policy and supported by state funding.

The faculty advisor model at the career and technical high school was referenced during college sophomore interviews as a consistent source of support. Educational institutions in the process of developing an advisor/advisee system would benefit from reviewing the model as a guide in order to promote a personalized education for each student.

The faculty advisors and college sophomores viewed the learning plan as a central and cohesive guide for students during high school and college. The use of the career and technical high school model of incorporating the learning plan into the individual advisor/advisee sessions would benefit schools struggling with the best way to incorporate the plan into advisories.

The results from this study indicate that dual enrollment with faculty advisor support can impact a student’s persistence to the second semester of the sophomore year in college. The researcher acknowledges that every student is different, but with supports in place to address individual student needs, students can experience success. Vincent
Tinto’s model of institutional departure is based on understanding the support systems that affect student success in college. It is the expectation of this researcher that the results of this study will lend support to the literature on implementing pre-college supports necessary for students to successfully transition from high school to college leading to a positive integration experience into the institution.
References


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Bailey, T., Hughes, K., & Karp, M. (2002). *What role can dual enrollment programs play in easing the transition between high school and postsecondary education?* New York: Community College Research Center.


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Mead, R. (2009). A comparison of the enrollment and academic success of dual credit and non-dual credit students at DesMoines Area Community College.  

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Oaks: Sage Publications.


Appendix A

Informed Consent
Individual Interview

Northeastern University: College of Professional Studies, Department of Education
Title of Research Study: A Case Study Examining the Impact of High School/Community College Dual Enrollment Advisor Partnership on College Retention
Investigators: Maureen Raia-Taylor, Doctoral Candidate, Northeastern University
Margaret Dougherty, Ed.D, Professor, Northeastern University

Purpose: The purpose of this research study is to determine if the support dual enrollment/college credit students receive from high school advisors and the college partnership, impacts their persistence through the first semester of the sophomore year in college. You must be at least 18 years old to be in this research project.

Procedures: You are being asked to participate in this research study because:
1. You have been a faculty-advisor at the school for at least two years;
2. You are the community college liaison; or
3. You are a college student who was enrolled in dual enrollment/college credit classes at the high school.

If you are willing to participate in this study, Maureen Raia-Taylor, doctoral candidate at Northeastern University, will interview you. The interview questions will focus on your experience and perception of the dual enrollment program and the impact on persistence in college. The interview will take approximately 45 minutes and will take place in a convenient location for you and the researcher. With your permission the interview will be digitally recorded for transcription and analysis purposes only.

Risks: There are no foreseeable risks or discomforts to you for taking part in this study. Your participation in this study is not evaluative and will not impact your position within the school.

Benefits: There are no direct benefits to you for participating in the study. It is hoped that your participation in the study may contribute to the research designed to better understand the importance of faculty-student relationships and the impact of supportive relationships on college persistence.

Confidentiality: Your participation in this study will be handled in a confidential manner. Participants will be assigned pseudonyms. Any reports or publications based on this research will use only group data and will not identify you, your school or any individual as being of this project. All digital recordings will be destroyed following transcription and analysis.

Voluntary: The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question. Even if you begin the study, you may withdraw at any time. Your decision to participate or not to participate will have no effect on your standing at the school.

Remuneration: You will not be paid for your participation in this study.

Contact Information: Should you have any questions about the study, please contact me at: raia-taylor.m@husky.neu.edu, 401-413-0892 or Margaret Dougherty, Ed.D at m.dougherty@neu.edu. If you have any questions about your rights in this research, you may
Consent Statement: I have read the preceding information describing the case study and understand that participation in the study is voluntary. My signature below indicates consent to interviewed.

☐ I agree to have the interview digitally recorded for transcription and analysis purposes.

☐ I do NOT want the interview to be digitally recorded.

____________________________________  ____________________________
Participant’s Signature               Date                        Participant's Printed Name

____________________________________  ____________________________
Researcher’s Signature                Date                        Researcher's Printed Name
Appendix B

Community College and School Agreement for Course Enrollment

BY SIGNING BELOW, I AGREE TO:

Student: In completing this community college program application, I consent to the disclosure by the community college to the high school and by the high school to the community college of personally identifiable information from ALL of my education records. The purpose of this disclosure is to permit the high school and its officers, employees and agents to evaluate the educational and other programs of study in light of my performance and experiences at the community college and to assist me in the pursuit of my education or career goals.

I realize that this class is an academic priority; because of this, I will:

- Share my syllabus with my advisor
- Enter assignment due dates and timelines into my work tracker calendar
- Introduce myself to my professor and find out his/her name, phone number, email and office hours and location.
- Ask my advisor for help if I have difficulty with an assignment.
- Attend each class even on days when the high school is on holiday.
- Complete all reading assignments.
- Turn in all assignments on time.

Student Signature: ________________________________ Date: ________________

Parent/Guardian: By signing this form I am giving permission for my son/daughter to enroll in a college class, understand the importance of this class to my child’s education and give the high school permission to review my child’s community college records. The high school and community college have entered into an agreement that allows my child, with permission, to receive a waiver to tuition and fees for one course per semester at the community college. I will support my son/daughter and his/her advisor in this important educational opportunity. If my son/daughter borrows a textbook for the class, I understand that I am financially responsible for the book if it is not returned at the end of the semester.

Parent/Guardian Signature: ________________________________ Date: ________________

School Official/Advisor: By signing this form I am agreeing to support this student in his/her college course. I understand the importance of this learning opportunity, and will acknowledge this when planning activities for my advisory. In addition, I will:

- Ensure that this learning opportunity is reflected on my student’s Learning Plan
- Introduce myself to his/her professor in the first two weeks of class
- Assist this student to enter deadlines from the syllabus into the work tracker
- Follow-up weekly with my student to confirm attendance, completed work and progress
- I will continue to check-in with the professor throughout the semester

School Official/Advisor Signature: ________________________________ Date: ________________

School Principal: By signing this form I am acknowledging that this student is ready for a college-level learning opportunity and that this form has been completed correctly. In addition, I am agreeing to emphasize the importance of the class when working with staff and advisors to plan the schedule for the school.

Principal Signature: ________________________________ Date: ________________
## Appendix C

### Advisor Interview Questions Connected to Research Question, Theorists and Initial Codes

<table>
<thead>
<tr>
<th>RESEARCH QUESTION</th>
<th>ADVISOR INTERVIEW QUESTIONS</th>
<th>INITIAL CODES</th>
<th>THEORISTS and CODE RELATIONSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are dual enrollment partnerships with support from high school faculty advisors perceived to affect college retention for enrolled students?</td>
<td>How many students in your advisor group have taken college classes in 2010-2011? How many classes has each taken?</td>
<td>DECT DECRTR</td>
<td>A.Astin -college transition V.Tinto-credit transfer &amp; persistence</td>
</tr>
<tr>
<td></td>
<td>Based on your experience what would you say are the strengths of the DE partnership? What would you like to see improved?</td>
<td>DESU</td>
<td>Pascarella &amp; Tinto student support Pascarella &amp; Tinto student support</td>
</tr>
<tr>
<td></td>
<td>Many of the students received credit for the courses taken. <strong>To what do you attribute their success?</strong> <em>(question added after Finding#1)</em></td>
<td>DESU</td>
<td>Pascarella &amp; Tinto student support</td>
</tr>
<tr>
<td></td>
<td>How have your students' motivations changed based on their college class experience? What challenges are the faced by students who participate in the DE program?</td>
<td>DESTIN DEINTDEV DEPERDEV</td>
<td>Astin- student involvement Astin-intellectual development Astin- personal development</td>
</tr>
<tr>
<td>How do you envision the DE program impacting a student's college choice after high school?</td>
<td>How often do you meet with your students regarding their progress in the DE classes?</td>
<td>DECOPER</td>
<td>DESTSU</td>
</tr>
</tbody>
</table>
Appendix D

College Student Interview Questions Connected to Research Question, Theorists and Initial Codes.

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Student Interview Questions</th>
<th>Initial Codes</th>
<th>Theorists</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do former DE students enrolled in the sophomore year in college perceive the support they received from high school/college advisors?</td>
<td>How did you learn about the DE/college credit program at the community college?</td>
<td>DESTSU</td>
<td>Pascarella &amp; Tinto student support</td>
</tr>
<tr>
<td></td>
<td>What support did you receive when taking the DE classes in high school?</td>
<td>DESTSU</td>
<td>Pascarella &amp; Tinto student support</td>
</tr>
<tr>
<td></td>
<td>Who initiated the support?</td>
<td>DEFA-SR</td>
<td>Tinto &amp; Pascarella Faculty-student Relationship</td>
</tr>
<tr>
<td></td>
<td>Do you believe that the support you received gave you confidence to handle college-level work? Give examples.</td>
<td>DESTSU-CT</td>
<td>Astin - college transition</td>
</tr>
<tr>
<td></td>
<td>Did you receive college credit for the courses taken? <strong>To what do you attribute your success in the courses? (Question added after Finding #1)</strong></td>
<td>DESTSU</td>
<td>Pascarella &amp; Tinto student support</td>
</tr>
<tr>
<td></td>
<td>How did the DE</td>
<td>DESTSU-CP</td>
<td>Tinto - college</td>
</tr>
<tr>
<td>Question</td>
<td>Code</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>program impact your college choice?</td>
<td></td>
<td>persistence</td>
<td></td>
</tr>
<tr>
<td>Are you in contact with your high school advisor?</td>
<td>DESTSU</td>
<td>Pascarella &amp; Tinto student support</td>
<td></td>
</tr>
<tr>
<td>Give an example of when you would contact her/him.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did your involvement in DE help you in transitioning to college?</td>
<td>DESTSU-CT</td>
<td>Astin - college transition</td>
<td></td>
</tr>
<tr>
<td>Did your DE credits transfer to college?</td>
<td>DECRTR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you access college advisors and faculty for assistance?</td>
<td>DEFA-SR</td>
<td>Tinto- faculty/student Relationship Code</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E

The Ten Distinguishers that form the Learning Design of the Big Picture Schools (Big Picture, Co., 2010, p. 5)

1. Learning In the Real World: LTI
2. One Student At A Time: Personalization
3. Authentic Assessment
4. School Organization
5. Advisory Structure
6. School Culture
7. Leadership
8. Parent/Family Engagement: Adult Support
9. School/College Partnership: College Preparation and Support
10. Professional Development
Appendix  F

Coding Used for Faculty Advisor Interview

Mitch’s responses were coded with 24 different codes either singly or in combination with other codes.

Mitch Advisor-Int. college courses
Mitch Advisor-Int. college courses\expectations\DE credit transfer
Mitch Advisor-Int. college courses
Mitch Advisor-Int. college courses\success in classes
Mitch Advisor-Int. college courses\expectations\DE credit transfer
Mitch Advisor-Int. college courses\expectations\grades & credits
Mitch Advisor-Int. dual enrollment\Student college exposure
Mitch Advisor-Int. dual enrollment\Student college exposure\academic opportunity
Mitch Advisor-Int. dual enrollment\Student college exposure\Student familiarity with college
Mitch Advisor-Int. dual enrollment\Practice college
Mitch Advisor-Int. dual enrollment\contact professor
Mitch Advisor-Int. college courses\expectations\grades & credits
Mitch Advisor-Int. college courses
Mitch Advisor-Int. college courses\success in classes
Mitch Advisor-Int. dual enrollment\funding
Mitch Advisor-Int. college courses\expectations\Motivation
Mitch Advisor-Int. college courses\expectations\Motivation\Independence
Mitch Advisor-Int. Faculty/student relationship HS
Mitch Advisor-Int. Faculty/student relationship HS\support from the HS
Mitch Advisor-Int. Faculty/student relationship HS
Mitch Advisor-Int. dual enrollment\study group
Mitch Advisor-Int. Faculty/student relationship HS\support from the HS
Mitch Advisor-Int. Faculty/student relationship HS
Mitch Advisor-Int. dual enrollment\contact professor
Mitch Advisor-Int. college courses\expectations\Motivation
Mitch Advisor-Int. college courses\expectations\Motivation\Independence
Mitch Advisor-Int. college courses\Student challenges
Mitch Advisor-Int. college courses
Mitch Advisor-Int. college courses\expectations
Mitch Advisor-Int. dual enrollment\impact on college choices
Mitch Advisor-Int. dual enrollment\contact professor
Mitch Advisor-Int. Faculty/student relationship HS
Mitch Advisor-Int. dual enrollment
Mitch Advisor-Int. Faculty/student relationship HS\Advisor support
Mitch Advisor-Int. Faculty/student relationship HS
Mitch Advisor-Int. Faculty/student relationship HS\Advisor support
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mitch Advisor-Int.</td>
<td>Faculty/student relationship HS\Advisor support</td>
</tr>
<tr>
<td>Mitch Advisor-Int.</td>
<td>Faculty/student relationship HS\Advisor support\Academic Learning Plan</td>
</tr>
<tr>
<td>Mitch Advisor-Int.</td>
<td>Faculty/student relationship HS\Advisor support\One-on-One</td>
</tr>
<tr>
<td>Mitch Advisor-Int.</td>
<td>Faculty/student relationship HS</td>
</tr>
<tr>
<td>Mitch Advisor-Int.</td>
<td>Faculty/student relationship HS\Advisor support</td>
</tr>
</tbody>
</table>