COMMUNITY COLLEGE AND UNIVERSITY EXPERIENCES OF HIGH SCHOOL DUAL ENROLLMENT STUDENTS

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A Dissertation Submitted to the Faculty of the College of Education in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

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by

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This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Deborah L. Floyd, Department of Educational Leadership, and has been approved by the members of her supervisory committee. It was submitted to the faculty of the College of Education and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

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The purpose of this study was to examine academic and social experiences of students who participated in a two-year intensive dual enrollment program housed on a community college campus. The academic experiences were examined through an analysis of community college and university data for 275 dually enrolled students and a comparison group of 258 traditional community college transfer students. An independent test of means was used to compare dual enrollment students to traditional community college transfer students. The findings were significant and found that dually enrolled students had higher community college GPAs, higher associate’s and bachelor’s degree completion rates, and shorter time periods to associate’s degree completion.

The social experiences were examined through the use of a survey from 93 students who participated in the intensive dual enrollment program. Repeated measures of analysis of variance (ANOVA) were used to examine the students’ experiences while
participating in the dual enrollment program compared to their regular high school and compared to the university. The analysis revealed that the dually enrolled students had significantly higher ratings of overall satisfaction with the dual enrollment program and better quality ratings for relationships with students, faculty, and administration while participating in the dual enrollment program, compared to their experiences while at the high school and university. Qualitative analysis of open-ended survey questions revealed that the dually enrolled students typically missed their friends and extracurricular activities of their regular high school, but many positive aspects of the dual enrollment experience made up for “missing out” on a traditional high school experience. Initially, students opted to participate in dual enrollment in order to get a free head start on college. Many survey respondents indicated that the small size of the program was crucial to their success by providing a close-knit family environment.

Recommendations are provided for policymakers to support dual enrollment programs and for high school, community college, and university advisors to provide guidance to address the unique concerns of dual enrollment students.
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Chapter 1

Introduction

Dual enrollment programs, in various forms, have been offered for over a hundred years as alternatives to traditional education for high school students to earn college credit. Dual enrollment is defined as “an academic program where college-level courses are offered to high school students for college credit” (Krueger, 2006, p. 1). High school students who are dually enrolled take college classes in order to earn both high school and college credits. Dual enrollment programs are seen as opportunities to save time and money, creating a seamless transition from high school to college, and providing more opportunities for student success (Hale, 2001).

It is important to consider how dual enrollment programs affect a student’s likelihood of earning a bachelor’s degree because the bachelor’s degree is considered by some to be “the gatekeeper to myriad social and individual benefits” (Cabrera, Burkum, & La Nasa, 2005, p. 155). Bachelor’s degree attainment is affected by numerous factors, including the type of academic preparation the student receives during high school (Adelman, 2006; Cabrera et al.). According to Adleman (2006), “the academic intensity of the student’s high school curriculum still counts more than anything else in precollegiate history in providing momentum toward completing a bachelor’s degree” (p. xviii). Dual enrollment programs may offer the level of academic intensity in high school to boost college performance. Earning college credits while in high school has also been shown to result in shortened time-to-degree (Adelman, 2004). Once enrolled in college,
an important indicator of persistence is the number of credits earned by the end of the first year in college (Adelman, 2006). Students who earn college credit while still in high school have a jump start on this important indicator of persistence. The findings from these studies show promising results and provide support for programs such as dual enrollment. However, the studies typically do not differentiate earning college credits through dual enrollment compared to other acceleration mechanisms such as Advanced Placement, International Baccalaureate, College Level Examination Program (CLEP), or college departmental exams.

Problem

Presently, there appears to be a strong push for more students to participate in dual enrollment. To provide students with a greater chance of bachelor’s degree attainment, Adelman (2006) suggests beginning the “transition process in high school with expanded dual enrollment programs offering true postsecondary course work” (p. xx). The Education Commission of the States (ECS) cites that implementation of dual enrollment programs are encouraged because they save students time and money while promoting rigorous academics (Hale, 2001).

Along side of these pressures, there are also growing concerns about dual enrollment. First, students may be earning excessive numbers of college credits while still in high school and may be shortchanged by this “fast-track opportunity” (Dougan, 2005; Miller, 2005). Also of concern is the notion of students “missing out” on traditional high school social activities by pursuing dual enrollment courses (Amos, 2005; Behrendt, 2003). Miller argues that loading up on too many courses could adversely impact student admission in selective universities. Finally, concerns about student maturity level and the
quality of dual enrollment courses may contribute to skepticism in university admissions officers when considering dual enrollment students for admission.

Dual enrollment presents a whole new angle on how younger students are engaged in a traditional higher education setting that is accustomed to older students. Students enrolled in intensive dual enrollment programs may earn enough college credits to complete an associate’s degree by the time they graduate high school. From a college admission’s stand point, these students are recent high school graduates seeking admission to universities, not as typical freshmen, but as transfer students enrolling in the third year of college. Even with promising results for dual enrollment in terms of academic achievement, one must consider the social implications related to younger students accelerating through college.

Even though studies of dual enrollment typically indicate positive results with regard to academic achievement, “the unknowns still outweigh the known when it comes to dual enrollment” (Krueger, 2006, p. 6). “Research shows that the more actively engaged students are…the more likely they are to learn and to stay in college until they achieve their academic goals” (Kuh, 2001). Therefore, how does participation in intensive dual enrollment programs effect the “engagement” of students in college? According to Astin (1993b), the quality of the college experience is strongly affected by the interactions that the student has with faculty and peers. With this in mind, how does dual enrollment affect the quality of the college experience and the types of interactions that students have with faculty and peers? Many questions remain unanswered. The problem to be addressed in this study is how participation in intensive dual enrollment programs affects academic performance and social experiences in higher education.
Purpose

The purpose of this study is to examine academic performance and social experiences of students who participate in a two-year intensive dual enrollment program and transfer to a state public university. This study also aims to provide a detailed description of this type of non-traditional dual enrollment program that transcends the norm for students matriculating through higher education.

Significance of the Problem

Support for dual enrollment as an accelerated pathway toward baccalaureate degree attainment will undoubtedly result in demands for increased accountability and will lead college administrators to seek models for dual enrollment programs that have been proven to be successful. This study aims to provide an examination of academic and social experiences of students who participated in an intensive dual enrollment program. Specifically, the intensive dual enrollment program selected for this study is the College Academy. The examination of this type of dual enrollment program may contribute to the formation of model dual enrollment programs that contribute to student success in higher education.

The College Academy

Dual enrollment programs take many forms, ranging from students taking a single dual enrollment course through distance learning to intensive dual enrollment programs where students may earn enough college credits to earn an associate’s degree while still in high school. The College Academy at Broward Community College, a dual enrollment public high school in Davie, Florida is an example of an intensive dual enrollment program. This non-traditional school opened in the fall of 2001 for high school juniors
The College Academy condenses the traditional experience by combining the last two years of high school with the first two years at a community college. College Academy students begin their 11th grade year in high school taking dual enrollment courses that satisfy requirements for a high school diploma and an associate’s degree concurrently. By the time they complete the program, nearly all College Academy students earn a high school diploma and an associate’s degree at the same time with the
expectation of entering a college or university as a transfer student to begin the third year of college. For the class of 2003, 100 students out of 111 seniors graduated with a high school diploma and an associate’s degree (Blasik, Sutton, & Knight, 2004). The first two graduating classes of College Academy were chosen for this study because more long-term effects, in terms of bachelor’s degree completion and social experiences, may be revealed in a study of this nature.

Research Questions

This study is concerned with the extent to which intensive dual enrollment programs prepare students to succeed at a state public university. The researcher proposed the following research questions regarding the College Academy students’ academic success and social experiences:

1. *Academic Success:* How well do College Academy students perform academically compared to traditional transfer students in terms of community college and state university grade point averages, associate’s and bachelor’s degree completion rates, and time to associate’s and bachelor’s degree completion?

2. *Social Experiences:* How do College Academy graduates describe their social experiences with respect to involvement in co-curricular activities, relationships with other students and faculty members, and other experiences as they relate to participation in an intensive dual enrollment program?

The researcher further posed the following research question related to the characteristics of students who have participated in the College Academy dual enrollment program:
3. *Descriptive:* Who participates in the College Academy program and what academic programs do they pursue?

Conceptual Framework

As College Academy students progress through secondary and higher education, they will transition from the high school, to the community college, and then to a four-year institution. With numerous factors influencing academic achievement and social involvement through these transitions, a conceptual framework is helpful in identifying variables throughout the transitions. The conceptual framework is adapted from Berger and Malaney (2003) and incorporates Astin’s (1993a) Input-Environment-Outcome (I-E-O) model. Berger and Malaney’s study examined the experiences of transfer students and suggest that “patterns of academic and social involvement shift as students move from two-year college setting to a four-year university” (2003, p. 1). Astin’s I-E-O model (1993a) serves as a framework for developing more complete educational assessment and evaluation activities that incorporate student inputs (I), the educational environment (E), and student outcomes (O). The conceptual framework looks at student characteristics upon entry into the program, student involvement during enrollment at the College Academy, the transfer process to a state university, student involvement during enrollment at the university, and outcomes. See Figure 1 for a model representation of the conceptual framework.
Figure 1. Conceptual Framework.

The inputs (I) for the conceptual framework identifies characteristics of the students upon entry into the College Academy. The environment (E) incorporates the students’ experiences during two years at the College Academy, the transfer process from the community college to the university, as well as the experiences while enrolled at the university. Ultimately, the outcomes (O) of the conceptual framework include information about bachelor’s degree completion and the students’ social experiences.

The first component of the conceptual framework, Student Entry Characteristics, addresses the inputs (I) of the I-E-O Model. Inputs refer to “those personal qualities the student brings initially to the educational program (including the student’s initial level of developed talent at the time of entry)” (Astin, 1993a, p. 18). Student scores on the college placement tests including the SAT, ACT, and the Computerized Placement Test (CPT) serve as measures of pre-program performance. The student’s level of involvement in co-curricular activities, quality of relationships with faculty and peers, satisfaction with high
school, and reasons for choosing to participate in the College Academy, along with demographics (gender and ethnicity), all provide additional information about the students upon entry into the dual enrollment program. Inclusion of input data when using the I-E-O model is imperative because inputs directly influence both the environment and outputs (Astin, 1993a).

The next three components in the conceptual framework, College Academy Experiences, Transfer Readiness, and University Experiences, collectively present a broad scope for the educational Environment (E) in the Astin’s I-E-O model. The Environment “refers to the student’s actual experiences during the educational program” (Astin, 1993a, p. 18).

The second component of the conceptual framework, College Academy Experiences, serves to present a picture of the community college educational environment. Much has been said about how student engagement is an important part of student learning and success in higher education (e.g., Kuh, 2001; Pascarella & Terenzini, 1991). Therefore, this component of the conceptual framework includes indicators of student engagement such as the students’ involvement in co-curricular activities and the quality of relationships with faculty and peers. Additionally, College Academy Experiences are viewed in terms of satisfaction with the dual enrollment program throughout the two years enrolled in the College Academy.

The third component of the conceptual framework, Transfer Readiness, seeks to describe the students’ readiness for transfer from the community college to the four-year university. This component looks at community college GPAs and associate’s degree completion rates as student characteristics upon entry into the four-year university.
Additionally, the third component looks at the environment in terms of challenges in the transfer process. When entering the four-year institution, transfer students may experience a complex adjustment process while being faced with numerous challenges (Laanan, 2001). According to Sandeen and Goodale (1976), transfer challenges may include issues such as negative attitudes and problems with admissions, registration, academic advising, financial aid, housing, student activities, career planning and placement, and articulation (as cited in Eggleston & Laanan, 2001). As transfer students, College Academy graduates may face many of these same challenges and as well as their own unique challenges.

The fourth component of the conceptual framework, State University Experiences, serves to present a picture of the Environment (E) at a state public university. To assess how well students perceive their own adjustment to a university, Berger and Malaney (2003) suggest ascertaining students’ levels of satisfaction with various aspects of the academic and social environment on campus. This component looks the students’ involvement in co-curricular activities, the quality of relationships with faculty and peers, and satisfaction with the educational experience during enrollment at the university.

The final component of the conceptual framework, Outcomes, seeks to describe the Outputs (O) of the educational experience and satisfaction with the program. Outputs “refer to the ‘talents we are trying to develop in our educational program’” (Astin, 1993a, p. 18). Outcomes will include measures of academic success in terms of university GPAs, time to bachelor’s degree completion, and bachelor’s degree completion rates.
Variables

Guided by the conceptual framework, the descriptive variables used in this study include gender, ethnicity, and degree majors. Variables related to the students’ social experiences included the students’ level of involvement in co-curricular activities, level of satisfaction with experiences, and the quality of relationships with other students, faculty, and staff during high school, the College Academy, and the state university. The independent variable is participation in the College Academy. Dependent variables include community college and state university GPAs, time to associate’s and bachelor’s degree completion, and associate’s and bachelor’s degree completion rates.

Hypotheses

The researcher proposed the following null hypotheses related to the academic performance of College Academy students.

H0₁ There is no difference in community college GPAs for College Academy students compared to traditional community college transfer students.

H0₂ There is no difference in state university GPAs for College Academy students compared to traditional community college transfer students.

H0₃ There is no difference in the time to associate’s degree completion for College Academy students compared to traditional community college transfer students.

H0₄ There is no difference in the time to bachelor’s degree completion for College Academy students compared to traditional community college transfer students.
H05 There is no difference in associate’s degree completion rates for College Academy students compared to traditional community college transfer students.

H06 There is no difference in bachelor’s degree completion rates for College Academy students compared to traditional community college transfer students.

The researcher further proposed the following null hypotheses related to the social experiences of College Academy students.

H07 There is no difference in the level of involvement of College Academy students while at the high school, the College Academy, and the university.

H08 There is no difference in the level of satisfaction of College Academy students while at the high school, the College Academy, and the university.

H09 There is no difference in the quality of relationships with other students and College Academy students while at the high school, the College Academy, and the university.

H010 There is no difference in the quality of relationships with faculty and College Academy students while at the high school, the College Academy, and the university.

H011 There is no difference in the quality of relationships with administration and College Academy students while at the high school, the College Academy, and the university.

Survey responses from College Academy students addressed the following research questions related to social experiences.

1. What did College Academy students like the most and the least about high school, the community college, and the university?
2. What factors influenced the students’ decisions to participate in the College Academy dual enrollment program?

3. How do College Academy graduates describe their preparation for transfer to a university and what type of challenges did they face?

4. How do College Academy graduates feel about “missing out” on a traditional high school experience?

Definitions

Major definitions of terms relevant to the study are listed below:

*Academic success*, for the purposes of this study, is measured by community college and university grade point averages, associate’s and bachelor’s degree completion rates, and time to bachelor’s degree completion.

*Acceleration mechanisms* are programs used to enable students to progress through college at an accelerated pace. Acceleration mechanisms include dual enrollment, Advanced Placement, International Baccalaureate, College Level Examination Program (CLEP), or college departmental exams.

*Associate’s degree completion rate* is the ratio of the number of students who complete an associate’s degree program to the total number of students to begin the associate’s degree program.

*Bachelor’s degree completion rate* is the ratio of the number of students who complete a bachelor’s degree program to the total number of students to begin the bachelor’s degree program.

*College Academy at Broward Community College* (CA@BCC) is an intensive two year program for dual-enrolled high school juniors and seniors enrolled in a public
high school on the central campus of Broward Community College. Admission to the College Academy is contingent upon high school grade point average, references, essays, and placement test scores.

*Computerized Placement Test* (CPT) is used to determine a student’s readiness for college level work. The CPT includes three numeric scores in reading comprehension, sentence skills, and elementary algebra to determine placement in English, reading, and mathematics.

*Credit-based transition programs* are programs such as dual enrollment, Advanced Placement, International Baccalaureate, Tech Prep, and middle college high schools that enable high school students to take college classes and earn college credit while still in high school (Bailey & Karp, 2003).

*Dual enrollment* refers to “the participation in college-level courses and the earning of college credits by high school students” (Waits, Setzer, & Lewis, 2005). Other terms, including concurrent enrollment, dual credit, dual enrollment, postsecondary enrollment, and coenrollment may be used to describe dual enrollment (Robertson, Chapman, & Gaskin, 2001).

*Early college high schools* are schools that “integrate high school and college resources to create an accelerated curriculum and allow students to graduate with a high school diploma and an associate’s degree in four or five years, instead of six” (Krueger, 2006, p. 1).

*Enhanced comprehensive programs* are dual enrollment programs in which students are provided with support services to promote academic success, such as counseling, in addition to the college coursework (Bailey & Karp, 2003).
*Intensive dual enrollment programs* are programs where students take dual enrollment courses during the 11th and 12th grade year to satisfy requirements for a high school diploma and associate’s degree concurrently. Early college high schools are examples of intensive dual enrollment programs.

*State University System* (SUS) of Florida includes ten public universities and the New College of Florida with a total student population of more than 275,000 (State University System of Florida, 2005).

*Time to associate’s degree* is the amount of time (in months) a student takes to complete an associate’s degree, from the date of first enrollment, to the graduation date.

*Time to bachelor’s degree* is the amount of time (in months) a student takes to complete a bachelor’s degree, from the date of first enrollment, to the graduation date.

*Traditional graduates* are students who complete four years of high school, before enrolling in a community college or university.

*Transfer students* are students who enroll in a community college for lower-division coursework, then transfer to a university for upper-division coursework.

Limitations and Delimitations

The study is limited to students who enrolled in associate of arts degree programs at Broward Community College beginning in the fall term of 2001 and fall term of 2002 by traditional means or through participation in the College Academy, an intensive dual enrollment program. Therefore, although interesting and useful, the findings of this study may not be generalized to other community college transfer students in the state of Florida or other parts of the nation.
The academic data were limited to information available through the Information Resource Management of the State University System of Florida (IRM-SUS) and the Student Database of the Florida Community College System. Therefore, the study was limited to students who attend public colleges and universities in Florida’s State University System. Students, if any, who completed degrees at private colleges or colleges outside of Florida were not counted as students who complete degrees in calculating the degree completion rate.

Additional data regarding students’ descriptions of their social experiences were collected through the use of a researcher designed survey thus the sample is limited to those students who voluntarily agreed to participate in the study and who completed the survey instrument. The survey instrument was administered exclusively to those students who participated in the College Academy, and were not administered to traditional students. As a result, comparisons of social experiences among dually enrolled and non-dually enrolled students cannot be made.

The use of a researcher designed survey and the potential of researcher bias may further limit the results of this study. Further, the results may not accurately reflect the opinions of the participants as the assumption is made that participants respond honestly and candidly about their experiences related to dual enrollment programs. However, “a good deal of evidence shows that students are accurate, credible reporters of their activities and how much they have benefited from their college experience, provided that items are clearly worded and students have the information required to accurately answer the questions” (Kuh, 2001, p. 4).
Chapter 2

Literature Review

This review of the literature presents an historical perspective of dual enrollment programs in the United States, explores the benefits of dual enrollment, and addresses the major issues and concerns surrounding dual enrollment. Related dissertations, studies, and reports are examined to determine the current state of dual enrollment. Additionally, a review of studies of community college transfer students and student engagement is included.

Many terms used to describe dual enrollment and most can be used interchangeably. They include: concurrent enrollment, dual credit, dual enrollment, postsecondary enrollment, and co-enrollment (Robertson et al., 2001). Simply put, dual enrollment allows students to earn college credit while still in high school.

There are a variety of delivery options for dual enrollment. Courses may be taught at a college campus, a high school, through interactive television, or other distance learning formats (Krueger, 2006). The instructors may be college professors and/or high school teachers. Courses may be taught during the school day, evenings, weekends, on or off campus, as a regular college course, or specially adapted to the high school’s objectives (Andrews, 2000; Greenberg, 1988).

History

Acceleration programs, such as dual enrollment for high school students are not new concepts in higher education. In fact, dual enrollment may be traced back to 1876,
when Johns Hopkins University established the Three-Year Collegiate Program (Greenberg, 1988). Other research indicates William Rainey Harper contributed to acceleration programs as president of University of Chicago when the university was restructured into a two-year junior and two-year senior college back in 1892 (Stoel, 1988). The junior program could be completed by advanced students while still in high school, while the “average” student could enter college after the eleventh grade. In 1959, the College Board gave students the opportunity to earn college credit through Advanced Placement examinations (Boswell, 2001). A few years later, Simon’s Rock Early College was founded in 1964 by Elizabeth B. Hall for students interested in early college admission (Stoel). Since Advanced Placement was available mostly to elite students, dual enrollment became an attractive alternative more accessible by less gifted students.

New York City was a leader in implementing dual enrollment programs starting in the 1970s. City-As-School was founded in 1972 as a New York City public alternative high school where students attend regular college courses taught by college faculty with traditional college students on a space available basis (Greenberg, 1988). Janet Lieberman’s concept of Middle College High Schools opened in 1973, fully housed on the campus of LaGuardia Community College in New York (Cunningham & Wagonlander, 2000). Middle College High Schools target at-risk students or students with high drop out potential. This program makes it possible for weak or under-prepared students to make the transition from high school to college and has a proven track record of success (Stoel, 1988). College Now opened in the fall of 1984 with students at several public high schools taking Kingsborough Community College courses taught by high school teachers operating in the capacity of adjunct college instructors (Greenberg).
State Support Programs

A report by the Education Commission of the States (2001) classifies state programs for dual enrollment in terms of the articulation agreements, funding arrangements, and course criteria. “Comprehensive” programs meet two or more of the following criteria: students pay little or no tuition, earn both high school and college credit, and/or have few restrictions. In states with “limited” programs, students may have to pay tuition, have more restrictions, and/or stringent criteria for dual enrollment courses. The study identifies Florida as one of 21 states with comprehensive dual enrollment programs allowing for greater access for high school students to earn college credit.

Incentives such as waiving tuition and fees, facilitating transfer of course credits, and having few course restrictions for dual enrollment promote greater access for high school students to earn college credit and help to bridge the gap from high school to college. Utah offers a state scholarship that covers 75% of tuition and fees for any student that earns an associate’s degree within three months of high school graduation (Boswell, 2000). Policies, such as requiring students to pay tuition for dual enrollment courses, may present barriers for students who wish to pursue dual enrollment, particularly for low-income students (Education Commission of the States, 2001).

Florida Policies

More than 30 years ago, Florida reacted to the increase in demand for dual enrollment programs. Florida statute FS240.116(1), enacted in 1973, provides high school students with options for college access such as dual enrollment. The statute acknowledged free dual enrollment programs for eligible high school students to enroll in
postsecondary courses creditable toward a vocational certificate, associate degree, or baccalaureate degree. Since then, more policies have been initiated at the state level leading to drastic increases in the number of students participating in dual enrollment. The Florida legislation clearly defines the requirements for the faculty in both the community college and high school. Dual-enrollment instructors “must have completed at least 18 graduate semester hours in the teaching discipline and hold at least a master’s degree, or hold the minimum of a master’s degree with a major in the teaching discipline” (Andrews, 2000, p. 35). These requirements are consistent with accreditation compliance requirements of the Southern Association of Colleges and Schools (SACS, 2004).

The Florida Department of Education website provides data as evidence of the growth of dual enrollment. On this website, the report for the Florida Community College System shows that the combined dual enrollment full-time equivalent (FTE) in the state of Florida nearly doubled from 1991 to 2001. In the 2001-02 academic year, over 30,000 students took dual enrollment courses at Florida’s community colleges to earn over 207,000 college credits. This represents an increase of over 100% from just ten years earlier according to a Study on Acceleration Mechanisms in Florida conducted by the Florida Board of Education (2003).

Benefits of Dual Enrollment

Dual enrollment programs benefit students, parents, colleges, and high schools. A 2001 report on Postsecondary Options from the Education Commission of the States (Hale) cites that implementation of dual enrollment programs are encouraged because they save students time and money while promoting rigorous academics. Dual enrollment
is intended to provide students with a greater range of courses, more in depth study, and shorter time to complete requirements for both a high school diploma and college degree.

For colleges, dual enrollment is an excellent recruitment tool, attracts better-prepared students, generates a positive image in the community, frees up space on campus to meet projected demands for college access, builds closer ties between colleges and their communities, results in higher rates of degree attainment, helps students progress faster, and improves student access to college (Boswell, 2001; Clark, 2001; Hoffman, 2005; Krueger, 2006).

For high schools, the enhanced curriculum of dual enrollment captures interests of students, promotes a positive image, boosts student performance, graduation, and high school-to-college transfer rates, provides greater academic challenges to students with “senioritis,” and greater opportunities for students at small rural schools (Andrews, 2000; Armstrong, 2001; Chapman, 2001; Clark, 2001; Krueger, 2006).

For both high schools and colleges, dual enrollment builds a solid base for future collaborations, alleviates high school-college curriculum redundancy promoting efficiency of learning, improves the transition from school to college, and enriches student and faculty experiences (Clark, 2001; Greenberg, 1988; Krueger, 2006).

Studies suggest that a broader range of students could benefit from dual enrollment, not just the high-achievers, by challenging the students with advanced coursework and promoting an understanding of the level of work expected at college (Karp, Bailey, Hughes, & Fermin, 2004; Hoffman, 2005; Vargas, 2005). Low to moderate achievers in high school can be successful in college courses, especially with the help of institutions providing support structures to enable student success (Greenberg,
1988). It must be noted that there is a need to balance the desire to increase access to a broader range of students while maintaining academic standards to ensure that only students that are ready for college level work participate in dual enrollment (Karp et al.).

Further, studies of individual programs show that dual enrollment programs add value to the high school students’ educational experiences (DiPuma 2002; Robertson et al., 2001). Dual enrollment programs encourage high schools and colleges to work together so that students are academically prepared and have a clear understanding of what is expected in college (Karp et al., 2004). Partnerships with high schools and community colleges have provided more students with access to college courses, new courses have been created to meet the needs of specialized programs of study, and students have gained confidence in pursuing college. The results of middle college high schools have consistently shown positive outcomes of dual enrollment including: improved school attendance, GPAs, and graduation rates, more graduates going on to higher education, and increased job placement rates (Cunningham & Wagonlander, 2000).

Problems and Issues

Dual enrollment programs have had many successes, but at the same time, the programs have struggled to gain reputable status with faculty, staff, students, and the community. Some opponents of dual enrollment site problems with state budget due to the perceived “double-dipping” impact on tax payers (Boswell, 2001). Those who support this initiative state that dual enrollment reduces tuition costs for students and families as well as saves tax payers money. Since dual enrollment allows students to earn the last two years of high school and the first two years of college at the same time, with
one expense, the economic savings could be tremendous (Greenberg, 1988; Krueger, 2006). Others feel that the benefits of a successful dual enrollment program greatly exceed any program related costs (Chapman, 2001).

Historically, dual enrollment programs have been faced with criticism. High school teachers may feel dual enrollment programs take away their exceptional students from regular high school classes. College faculty may be concerned with “going down” to the high school to teach high school students. Dougan (2005, p. B20) argues dual enrollment may be a burden to faculty having to teach “younger, less mature, and underprepared students” resulting in a “diminished learning experience for the entire class.” Students may be concerned with the stigma of enrolling in a community college or having the result of doing poorly on permanent college transcripts. Administrators are concerned with problems arising from the significant difference in age and maturity in high school and college students.

With increasing awareness and proven successes, dual enrollment programs have dispelled these beliefs. High school teachers may now expect to prepare their best students to take college classes. College professors may discover that their best class is at the high school with all honor students. Students may gain respect for community colleges offering academically challenging courses. High school students tend to blend in with their classmates, and rise to the maturity level appropriate for college. In many cases, both the professor and classmates are unaware of the dual enrollment status of students (Andrews, 2000; McCabe, 2000).

A primary concern of dual enrollment programs falls on the quality of the instruction and the academic rigor of the courses (Krueger, 2006). The most resistance is
found at selective colleges where officials such as Gary Ripple, director of admissions at Lafayette College believe that “a college-level course should be offered on a college campus, taught by a college professor, with college students in the room” (Reisberg, 1998, p. A39). Ripple even used the phrase “gypsy courses” to describe dual enrollment courses. This belief, shared by universities that refuse to recognize dual enrollment transfer credits, is the result of a lack of understanding of programs and awareness that dual enrollment teachers meet specific requirements and are capable of delivering high quality instruction (Boswell, 2000). Bailey, Alfonso, Calcagno, Jenkins, Kienzl, and Leinbach (2004) suggest developing ways to ensure the rigor of dual enrollment courses in order to maintain the integrity of postsecondary education.

Another issue for dual enrollment is the distinct difference between the culture of a community college and that of a high school. The campus culture impacts student behavior, expectations, and administration of the high school compared to what may be observed at the community college. When high school students attend classes on a college campus, school officials and parents are concerned with the safety and care of the students and expect more supervision than expected for a community college (Azinger, 2000). With this in mind, it is crucial for administrators to be aware of the legal implications of dual enrollment. The standard of care for high school students, dictated by age and maturity, is certainly higher than that of adults (Lugg, 2000). In the community college, students are viewed as adults with an average age of 29 years old (American Association of Community Colleges, n.d.) with the expectation that adult students behave appropriately.
Studies of Dual Enrollment

The increasing popularity of acceleration mechanisms such as dual enrollment has prompted studies of dual enrollment programs. The studies focus on enrollment, classifications of programs in terms of policies and methods of delivery, the effectiveness of the programs in terms of student achievement, and student satisfaction (Adelman, 2004; Bailey and Karp, 2003; Burns and Lewis, 2000; Crooks, 1998; DiPuma, 2002; Florida Board of Education, 2003; Karp, et.al, 2004; Kleiner & Lewis, 2005; McConnaha, 1996; Midcap, 2002; Peng, 2003; Porter, 2003; Waits, Setzer, & Lewis, 2005; Windham & Perkins, 2001).

A study using NELS:88/2000 data by the U.S. Department of Education sought to determine “whether – and to what extent – students’ use of credit-by-examination and postsecondary credits earned by coursework prior to high school graduation accelerated their progress toward degrees and, in fact, shortened time-to-degree” (Adelman, 2004, p.55). The study found that “for those who earned at least a bachelor’s degree, the more credits earned by examination and in dual enrollment, the shorter the time-to-degree. For those with no acceleration credits, time-to-degree averaged 4.65 years elapsed calendar years; for those who earned 9 or more acceleration credits, time-to-degree averaged 4.25 years” (Adelman, 2004, p.55). The findings from this study “encourage research that would split out the dual-enrollment portion of acceleration credits … and whether dual-enrollment prepares students for postsecondary coursework” (Windham and Perkins, 2001 as cited in Adelman, 2004, p.55).

The National Center for Education Statistics issued a report titled, *Dual Credit and Exam-based Courses in U.S. Public High Schools: 2002-03*, to provide baseline
information regarding the prevalence and characteristics of acceleration mechanisms, such as dual enrollment, Advanced Placement, and International Baccalaureate (Waits, Setzer, & Lewis, 2005). During the reported school year, the study found that 71% of all public high schools offered courses for dual credit with approximately 1.2 million enrollments in dual credit courses. The majority of these courses, 74%, were taught on a high school campus.

A companion report from the National Center for Education Statistics titled, *Dual Enrollment of High School Students at Postsecondary Institutions: 2002-03*, was designed to provide national estimates specifically for dual enrollment programs using data collected through the Postsecondary Education Quick Information System (PEQIS) (Kleiner & Lewis, 2005). The study reports that during the 2002-03 academic year, nearly all, 98%, of public 2-year institutions had high school students taking courses for college credit and approximately 680,000 students took courses through dual enrollment programs. This report provides additional characteristics of dual enrollment programs such as eligibility requirements, funding, instructors, curriculum, and course location.

The Florida Board of Education (2003) conducted a *Study on Acceleration Mechanisms in Florida*. They found that all 28 community colleges participate in dual enrollment programs. The colleges with the largest enrollment of dually enrolled students are: Valencia Community College, Indian River Community College, Brevard Community College, Gulf Coast Community College, and Palm Beach Community College. The study discusses enrollment growth, delivery, and funding methods for school districts and community colleges. The study also looks at the success of the
students that participate in dual enrollment and reports that 80% of the students are successful.

A report from the U.S. Department of Education, titled *State Dual Enrollment Policies: Addressing Access and Quality*, summarizes state sponsorship and regulation of dual enrollment, considers ways state policies promote or inhibit the growth of dual enrollment, and poses questions for considering increasing access to dual enrollment programs for middle- and low-achieving students (Karp, et.al, 2004). This report identifies twelve states with no regulation addressing dual enrollment, and those states that do address dual enrollment range from offering detailed regulations to only providing minimal guidance.

Dual enrollment programs may be examined in terms of academic performance using retention rates, grade point averages, and success in subsequent coursework as indicators of student success. Peng (2003) compared dually enrolled and non-dually enrolled students in the first two years of public four-year universities in Texas. Peng’s findings indicated that students who participated in dual enrollment had higher grade point averages and retention rates at the university level than non-participants. DiPuma (2002) examined an individual dual enrollment program aimed at providing students who might not otherwise be college-bound an opportunity to successfully complete college classes. DiPuma found the students in this program performed similarly to regularly enrolled students and slightly better than first time, first term college students. Windham and Perkins (2001) sought to determine if students who have taken dual enrollment courses in the Florida Community College System (FCCS) are prepared for the next course. The findings of this study are significant and indicate that dual enrollment
students have successful experiences in subsequent coursework. These studies show promising student outcomes for dual enrollment, albeit measuring only short term effects.

Dual enrollment programs may also be studied by examining factors beyond academic performance, such as student motivation, student perceptions, student satisfaction, and parental concerns. Burns and Lewis (2000) found that students taking dual enrollment classes at a college campus enjoyed more academic independence than those who had dual enrollment classes on the high school campus (as cited in Porter, 2003). Midcap (2002) surveyed dual enrollment students attending a rural community college and found that participants perceived that dual enrollment was beneficial, although various aspects of the program could be improved to facilitate the process. Crooks (1998) study revealed parental concerns for dual enrollment in terms of separation from peer groups, inadequate advising, and missing out on high school activities. McConnaha (1996) found dual enrollment students to be highly motivated yet, some students, who were influenced by others to take dual enrollment, indicated that the program had a negative effect on their behavior and social life. These studies of dual enrollment reveal mixed results suggesting that, in addition to academic performance, social experiences of dual enrollment students should be of concern.

In studies by Kim (2005) and Bailey and Karp (2003), the authors concluded that “minimal research offered rigorous evidence of the impact of dual credit or dual enrollment on student outcomes” (as cited in Bragg & Kim, 2005, p.2). Further, the authors note that many studies of dual enrollment are “methodologically flawed because they fail to account for differences in academic characteristics, aspirations and motivations of participants and non-participants” (Bragg & Kim, 2005, p. 2).
Studies of Transfer Students

With a majority of dual enrollment students enrolling in community colleges, and a growing number of those students earning enough credits to fulfill nearly all of the requirements of an associate’s degree, it is important to consider studies that relate to transfer students and the transfer of credits toward completion of a baccalaureate degree. The studies of transfer students presented in this section will focus on the success of transfer students at four-year institutions, the importance of community colleges in the transfer process, and the issues faced by transfer students as they adjust to the challenges of a four-year institution.

With the transfer function considered to be one of the most important functions of community colleges, particularly for low-income and minority students (Laanan, 2001; Wellman, 2004), it is not surprising that success of community college transfer students is typically measured in terms of degree completion and academic performance at universities and colleges that award baccalaureate degrees. According to a study of community college student enrollment, Bailey et al. (2004) discuss the notion of degree completion and transfer as indicators of student success. The authors analyzed student persistence and graduation experience using data from the Integrated Postsecondary Education Data System (IPEDS) from all postsecondary institutions in the United States and data from the Beginning Postsecondary Students Longitudinal Study of 1995-96 (BPS96). The survey revealed that “only 36 percent of students who enrolled in a community college as their first postsecondary enrollment in the 1995-96 school year had completed a certificate, associate, or bachelor’s degree within six years” (Bailey, et al.,
One would expect that for students who get a head start on college coursework through dual enrollment, degree completion rates would be higher.

Glass and Harrington (2002) examined the notion of transfer shock, for students transferring from a community college to a university. Transfer shock is defined as “a decline in the GPA on transferring from a community college to a four-year institution (often experienced in the first semester)” (Glass & Harrington, 2002, p. 417) which may be attributed to the challenges of adjusting to the differences in the university environment compared to the community college environment. The phenomenon may be the point where some transfer students leave the four-year institution. Glass and Harrington concluded that transfer students seemed to experience a decline in their GPA after the first semester in their major area of study but the students recovered from the declining GPA in the next semester. They also found that, by the time of graduation, transfer students’ GPAs are the same or better than those of native students. Transfer shock may pose an even greater threat to students who accelerate through the community college through dual enrollment because they are younger and may have fewer peers to relate to at the university.

The National Center for Education Statistics published a report on transfer students using data from the follow up the 1990 Beginning Postsecondary Student Longitudinal Study and the 1990 National Postsecondary Student Aid Study. Among the findings of this study, the authors McCormick and Carroll (1997) found that community college students who complete the associate’s degree before transferring have a much higher rate of bachelor’s degree attainment than those who transferred without any
credential. This is important to consider if dual enrollment students transfer to the university before completing their associate’s degree.

Berger and Malaney (2003) examined the four-year college adjustment process of community college transfer students. They describe how four-year institutions are hesitant about enrolling transfer students due to numerous reasons, including the failure of many transfer students to succeed academically.

“Most studies of community college transfers have focused on academic achievement as an indicator of how well students have adjusted to life at a four-year institution. However, adjustment to college life involves … a wide range of academic and social interactions and outcomes that must be considered in a comprehensive view of the college adjustment process. It is important to consider how well students adjust to and fit in with the academic and social environments of a campus in order to have a more complete understanding of how well transfer students adjust to a four-year university. (Tinto, 1975, 1993, as cited in Berger & Malaney, 2003, p. 4).

Transfer students are likely to experience a complex adjustment process because of the environmental differences between two- and four-year institutions (Lanaan, 2001, p. 11). According to Sandeen and Goodale (1976), transfer students may be faced with a variety of issues including negative attitudes and problems with admissions, registration, academic advising, financial aid, housing, student activities, career planning and placement, and articulation (as cited in Eggleston & Laanan, 2001). Laanan (2001) argues that further research is necessary to determine the complexity of transfer students’ adjustment processes and the extent to which their experiences at the community college
assist or hinder their academic progress at the four-year institution. For younger students who accelerate through college by dual enrollment, the college adjustment process may be even more complex.

**Student Engagement**

High school students may take dual enrollment courses through a variety of delivery options. In addition to their regular high school courses, high school students may enroll in dual enrollment classes in the evenings or on weekends, in lieu of other extra-curricular activities. How do additional demands placed on dual enrollment students impact their success? Does participation in dual enrollment programs impact student engagement? Much has been said about how student engagement is an important part of student learning and success in higher education (e.g., Kuh, 2001; Pascarella & Terenzini, 1991). In fact, the National Survey of Student Engagement (NSSE) and the Community College Survey of Student Engagement (CCSSE) are being used by institutions to “identify aspects of the undergraduate experience inside and outside the classroom that can be improved through changes in policies and practices more consistent with good practices in undergraduate education” (National Survey of Student Engagement, 2006). The researcher has not found studies that address the unique challenges faced by dual enrollment students as they relate to student engagement and involvement in higher education.

**Chapter Summary**

Dual enrollment has grown in popularity, enabled students to excel academically, and is in the process of dispelling the misconceptions of critics. As more people become aware of the possibilities of dual enrollment programs, support in the form of funding,
legislation, and prestige will continue to grow. Current discrepancies in state programs, incentives, and barriers, prompt further studies of dual enrollment programs. The lack of comprehensive data on the effectiveness of dual enrollment programs contributes to this need for more research. There is a need to assess the quality of dual enrollment program, to develop a deeper understanding of the impact of dual enrollment programs on student outcomes, and to present valid numbers of students participating in dual enrollment.

A comprehensive examination of dual enrollment programs should seek to determine long term effects of dual enrollment on students’ academic achievement as well as the impact that participation in dual enrollment has on students’ social experiences in higher education. The future success of dual enrollment programs lies heavily on an increasing awareness of the diverse needs of dual enrollment students, the search and implementation of innovative ways to deliver dual enrollment courses, and collaboration among faculty, staff, administration, and legislators at the local, state, and national level.
Chapter 3

Methodology

Chapter 3 presents the methodology of this study of a two-year intensive dual enrollment program. This chapter includes a description of the institutional setting, provides the criteria used for selecting the subjects to be studied, provides demographic characteristics of the subjects involved in the study, as well as procedures for gathering and analyzing the quantitative and qualitative data from academic records and the survey instrument.

Institutional Setting

Broward Community College (BCC) is a large urban, multi-campus public community college with the third largest unduplicated student headcount in the Florida Community College System, serving over 50,000 students (Florida Community College System, 2005). As 1 of 28 community colleges in Florida, BCC is the principal provider of a broad range of lower-division undergraduate and technical and occupational training for the residents of Broward County (Broward Community College Catalog, 2005). The student population is diverse with 34% white non-Hispanic students, 28% black non-Hispanic students, and 22% Hispanic students (Florida Community College System, 2005).

BCC students may matriculate into the State University System (SUS) of Florida, which includes ten public universities and the New College of Florida with a total student population of more than 275,000 (State University System of Florida, 2005). In the Fall
2004 semester, 6841 Broward Community College transfer students were enrolled in the SUS of Florida representing approximately 8.6% of all Florida Community College transfer students in the SUS of Florida (Community College & Technical Center MIS, n.d.). Internal studies of the Florida Community College System have indicated that approximately 75% of AA degree earning students will eventually transfer to the SUS (Florida Community Colleges & Workforce Education, 1998).

The Broward County Public School district is considered to be nation’s sixth largest, and largest fully-accredited school district. The total enrollment for grades K-12 in the 2006-2007 school year was 262,616 students. There are 32 high schools for students in grades 9 through 12 with a total enrollment of 72,633 students (Broward County Public School District, n.d.). As 1 of 32 high schools in the district, the College Academy’s enrollment is 315 students in grades 11 and 12 for the 2006-2007 school year.

The College Academy at Broward Community College is a two-year intensive dual enrollment program which is housed on the Davie campus of Broward Community College. The College Academy is a joint venture of the Broward County Public School District and Broward Community College. The College Academy offices are located in a central location in one building on the campus and include a study hall room and offices of the faculty, administration, guidance, and administrative support staff. Students report to the College Academy office to sign in daily for attendance purposes. The College Academy faculty include nine teachers: three English teachers, three mathematics teachers, and three social studies teachers. Students take English, mathematics, and social studies in afternoon classes with College Academy teachers. These classes include only dual enrollment students of the College Academy. In the mornings, College Academy
students take other required classes and electives with Broward Community College professors. The morning classes are a mix of College Academy students with traditional community college students. The morning class times and locations are varied depending on the individual students’ schedules.

Admission Requirements for College Academy Students

Students seeking admission to the College Academy must apply to the program at the end of the sophomore year of high school. To be considered for admission, students must have a 3.0 unweighted GPA, earned at least 14 high school credits, received a passing score for the Florida Comprehensive Achievement Test, and meet score requirements on the College Placement Test or the SAT or ACT. The students must submit an application that includes teacher and counselor recommendations and a personal essay.

Subjects

The subjects in this study included dual enrollment students who enrolled in the College Academy (CA) at Broward Community College, and a comparative sample of non dual enrollment students who enrolled in Broward Community College (BCC) during the Fall of 2001 and 2002 semesters. For the purposes of this study, traditional graduates are those who enroll full time at the community college after graduation from high school, for approximately two academic years before transferring to a public four-year institution. The students were divided into four cohorts of students: two cohorts of students who attended the College Academy and two cohorts of non dual enrollment students who attended Broward Community College.
Cohort A included all 111 dual enrollment students who enrolled in the College Academy in the Fall of 2001. Cohort B included a comparative sample of 98 traditional community college students who enrolled in BCC during the Fall of 2001. Cohort C included all 164 dual enrollment students who enrolled in the College Academy in the Fall of 2002. Cohort C included a comparative sample of 160 traditional community college students who enrolled in Broward Community College during the Fall of 2002.

The comparative samples of traditional community college students were selected using the community college academic records database. First, students were chosen for this study by using used the following selection criteria:

- Enrolled as a first time in college (FTIC) freshman in the Fall of 2001 or Fall of 2002 semesters.
- Enrolled in either an Associate of Arts (AA) or Associate of Science (AS) degree program.
- Met minimum score requirements of college entrance tests for placement into college level mathematics and English.
  - College Placement Tests Scores: 72 on Elementary Algebra, 83 on Reading, and 83 on Writing.
  - SAT Scores: 440 on Verbal, 440 on Mathematics, and 440 on Reading.
  - ACT Scores: 17 on English, 18 on Reading, and 19 on Mathematics

From this sample, the Cohorts B and D were purposely selected so that the gender and race distributions were roughly equivalent to Cohorts A and C respectively. See Table 2 for the gender and ethnicity breakdown of each cohort.
Table 2

*Gender and Ethnicity Breakdown of Cohorts*

<table>
<thead>
<tr>
<th></th>
<th>College Academy Cohort A</th>
<th>Traditional Students Cohort B</th>
<th>College Academy Cohort C</th>
<th>Traditional Students Cohort D</th>
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<tbody>
<tr>
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</tbody>
</table>
Procedures

To examine academic and social experiences of graduates of The College Academy compared to traditional BCC students, the researcher gathered data, as described in the conceptual framework, from two primary sources of data: academic records and surveys.

Academic Records

Academic records provided longitudinal data from students in all Cohorts and were retrieved from the academic records database of Broward Community College and the database from the Information Resource Management of the State University System of Florida (IRM-SUS). The data were collected in the Summer of 2007, six years after the initial enrollment of Cohorts A and C and five years after the initial enrollment of Cohorts B and D. Student identifiers were not included in the extracted data to preserve the anonymity of the students.

Descriptive variables include gender, ethnicity, and degree majors. The independent variable is participation in the College Academy. Dependent academic variables include community college and university GPAs, time to associate’s and bachelor’s degree completion, and associate’s and bachelor’s degree completion rates.

Survey Instrument

The researcher designed survey used in this study included open-ended questions and items where students rate experiences of the traditional high school, the College Academy, the community college, the transfer process, the university, and outcomes (see Appendix A). To assess how well students perceive their own adjustment to a university, Berger and Malaney (2003) suggest ascertaining students’ levels of satisfaction with
various aspects of the academic and social environment on campus. According to Kozeracki (2001), student surveys may provide more information about the transfer process and the perceptions of effectiveness of the program.

The items in the survey focus on elements of students’ social experiences as described in the conceptual framework and were adapted from the *National Survey of Student Engagement* (NSSE, 2005). The content of the NSSE “represents student behaviors that are highly correlated with many desirable learning and personal development outcomes of college” and were specifically designed to “assess the extent to which students are engaged in empirically derived good educational practices and what they gain from their college experience” (Kuh, 2001, p.2).

Dependent social variables include levels of involvement in cocurricular activities, levels of satisfaction, and levels of the quality of relationships with students, faculty, and administration at the high school, the College Academy, and the university.

Participant responses to surveys provided data on the following:

- Descriptions of academic and social experiences at the high school, the College Academy, and the University.
- Levels of involvement in co-curricular activities during high school, the College Academy, and the public college or university in Florida’s State University System.
- Overall satisfaction with high school, the College Academy, and the public college or university in Florida’s State University System
- Quality of relationships with other students, faculty, and other personnel
- Factors influencing the decision to enroll in the College Academy
Challenges in transferring to the public college or university in Florida’s State University System

Responses were solicited only from students in Cohort A and Cohort C who were enrolled in the College Academy beginning in 2001 and 2002. In the spring of 2007, a postcard was mailed to all students in Cohort A and Cohort C with the website address for students to access the online survey. Students were notified using informed consent about the study and could withdraw from the study at any time. Follow-up emails were sent to students through the use of MySpace and Facebook websites in an effort to increase response rates. Out of 275 students, 93 participated in the survey representing a 34% response rate. Approximately 70% of the respondents were female. The race/ethnicity breakdown of the participants was 50% white, 18% Hispanic, 12% Black, 20% other or did not respond.

Quantitative Analysis Techniques

“Using data to assess the student experience provides powerful, and sometimes surprising, results” (Community College Survey of Student Engagement, 2006). To determine the nature of College Academy students’ academic postsecondary experiences, data from academic records were analyzed and compared among cohorts. College Academy students in Cohorts A and C were compared to traditional students in Cohorts B and D respectively. Findings were based on whether significant differences exist among the cohorts of the dependent variables (GPAs, time to degree completion, degree completion rates, levels of satisfaction, levels of involvement, and relationship quality ratings).
A simple comparison of the groups would not provide enough information to make a judgment due to inherent differences between College Academy students and traditional students. According to Astin (1993a), “all studies of college impact should take into account student entry characteristics and aspects of the campus environment in order to estimate how college influences student outcomes” (as cited in Berger & Malaney, 2003, p. 5). The researcher attempted to select comparison groups as close as possible to the College Academy students. Therefore, only students with similar pre-program ability in terms of placement test scores and roughly equivalent breakdown of gender and ethnicity. Therefore, college placement tests were used as a measure of pre-program academic ability.

Independent tests of means was used to assess the statistical significance of mean differences in community college and university GPA, and time to associate’s and bachelor’s degree completion for College Academy students compared to traditional students. Tests of proportion was used to assess the statistical significance of differences in proportions of associate’s and bachelor’s degree completion rates for College Academy students compared to traditional students. Repeated measures analysis of variance (ANOVA) was used to determine if significant differences exist in the students reported levels of involvement, satisfaction, and quality of relationships at the high school, College Academy, and university.

Qualitative Analysis Techniques

Responses to open-ended survey questions provided additional information about the participants’ experiences with dual enrollment. Data from open-ended survey questions were assigned units of meaning through the use of codes. Subsequently, pattern
coding was used in which the initial codes were grouped into a smaller number of themes or constructs. Pattern coding “helps the researcher elaborate a cognitive map, an evolving, more integrated schema for understanding local incidents and interactions” (Miles & Huberman, 1994, p. 69). The themes or constructs were organized through the use of a data display in which the information is presented visually, in a systematic way, to enable the user to draw conclusions (Miles & Huberman). Narratives selected from the participants’ responses to the open ended survey items were presented to illustrate the themes.
Chapter 4
Analysis of the Data

The purpose of this study was to examine the academic performance and social experiences of students who attended the College Academy, a two-year intensive dual enrollment program. This chapter restates the research questions that guided the study and presents the results from the statistical analysis of the data retrieved from academic records and selected items from the survey instrument. This chapter also presents the major themes that were revealed through qualitative analysis of open ended survey questions.

Research Question #1 – Academic Success

The researcher posed the following question with regard to the academic success of College Academy students: How well do College Academy students perform academically compared to traditional transfer students in terms of community college and state university grade point averages, associate’s and bachelor’s degree completion rates, and time to associate’s and bachelor’s degree completion?

The researcher used $t$ tests of means to determine if significant differences existed among grade point averages and time to degree completion and test of two proportions to determine if there was a significant difference in degree completion rates. See Table 3 and Table 4 in Appendix D for the output generated by SPSS used in the analysis. Cohort A, consisting of dual enrollment students who began the College Academy program in the Fall of 2001, was compared to Cohort B, consisting of traditional community college
transfer students who enrolled in the community college in the same semester. Similarly, Cohort C, consisting of dual enrollment students who began the College Academy program in the Fall of 2002, was compared to Cohort D, consisting of traditional community college transfer students who began taking courses in the same semester.

**Academic Success: Comparison of Cohorts A and B**

College Academy students had significantly higher community college grade point averages ($M = 3.2163, SD = .43717$) compared to traditional community college students ($M = 2.8394, SD = .82577$), $t(143) = 4.046, p < .001$ (two-tailed), $d = .57$. There was not a significant difference in university grade point averages for College Academy students ($M = 2.8855, SD = .91169$) compared to traditional community college transfer students ($M = 2.9424, SD = .70391$), $t(119) = -.328, p = .744$ (two-tailed). See Table 5 in Appendix D for summary statistics with a breakdown by gender.

College Academy students had significantly higher associate’s degree completion rates (97.3%) compared to traditional community college students (38.8%). College Academy students had significantly higher bachelor’s degree completion rates (46.8%) compared to traditional community college students (20.4%). See Table 6 and Table 7 in Appendix D for the numbers of students who completed the associate’s and bachelor’s degree with a breakdown by gender.

College Academy students had significantly shorter time to associate’s degree completion ($M = 22.47, SD = 5.661$) compared to traditional community college students ($M = 34.03, SD = 13.995$), $t(41.335) = -4.949, p < .001$ (two-tailed), $d = 1.08$. There was not a significant difference in time to bachelor’s degree completion for College Academy students ($M = 53.62, SD = 9.123$) compared to traditional community college transfer
students ($M = 56.55, SD = 9.350$), $t(70) = -1.214, p = .229$ (two-tailed). See Table 5 in Appendix D for summary statistics with a breakdown by gender.

**Academic Success: Comparison of Cohorts C and D**

The statistical analysis of the comparison of Cohorts C and D yielded similar results as the comparison of Cohorts A and B. College Academy students had significantly higher community college grade point averages ($M = 3.2036, SD = .41497$) compared to traditional community college transfer students ($M = 2.8093, SD = .69785$), $t(257.707) = 6.162, p < .001$ (two-tailed), $d = .69$. There was not a significant difference in university grade point averages for College Academy students ($M = 2.9190, SD = .74865$) compared to traditional community college transfer students ($M = 2.9211, SD = .66321$), $t(177) = -.018, p = .985$ (two-tailed). See Table 8 in Appendix D for summary statistics with a breakdown by gender.

College Academy students had significantly higher associate’s degree completion rates (98.8%) compared to traditional community college students (38.1%), $p < .001$. College Academy students had significantly higher bachelor’s degree completion rates (27.4%) compared to traditional community college students (11.3%), $p < .001$. See Table 6 and Table 7 in Appendix D for the numbers of students who completed the associate’s and bachelor’s degree with a breakdown by gender.

College Academy students had significantly shorter time to associate’s degree completion ($M = 21.69, SD = 2.485$) compared to traditional community college students ($M = 34.48, SD = 12.037$), $t(61.936) = -8.229, p < .001$ (two-tailed), $d = 1.46$. There was not a significant difference in time to bachelor’s degree completion for College Academy students ($M = 51.53, SD = 4.855$) compared to traditional community college transfer
students \((M = 50.83, SD = 4.048)\), \(t(61) = .540, p = .591\) (two-tailed). See Table 8 in Appendix D for summary statistics with a breakdown by gender.

**Research Question #2 – Social Experiences**

The researcher posed the following question with regard to the social experiences of College Academy student: How do College Academy graduates describe their social experiences with respect to involvement in co-curricular activities, relationships with other students and faculty members, and other experiences as they relate to participation in an intensive dual enrollment program?

Repeated measures analysis of variance (ANOVA) tests were used to examine the equality of the participants’ ratings of their social experiences at the high school, College Academy, and the university. Mauchly’s test was used to test the sphericity assumption in the repeated measures ANOVA. When Mauchly's test was not significant, univariate repeated measures ANOVA were used. When Mauchly's test was significant, \(p<.05\), multivariate tests were used. When the multivariate tests and univariate tests were significant, post hoc pairwise comparisons were used to determine if the College Academy ratings were significantly different than the high school and university ratings. See Tables 9, 10 and 11 for summary statistics used in the analysis with a breakdown by gender.

*Involvement in Co-curricular Activities*

Questions 1, 7, and 18 of the survey related to the students level of involvement in co-curricular activities, (such as student government, clubs, sports, etc.) at the high school, College Academy, and university respectively. The responses ranged from a low score of 1 indicating no involvement to a high score of 7 indicating a high level of
involvement. There was not a significant difference in the students’ levels of involvement in co-curricular activities at the high school ($M = 3.75, SD = 1.912$), College Academy ($M = 3.59, SD = 2.225$), and the university ($M = 3.23, SD = 1.953$), $F(2, 81) = 2.367, p = .100$.

**Overall Satisfaction**

Questions 2, 8, and 19 of the survey asked participants to indicate the overall satisfaction with the institution at the high school, College Academy, and university. The responses ranged from a low score of 1 indicating Very Dissatisfied to a high score of 7 indicating Very Satisfied. A score of 4 indicated neutral. There was a significant difference in the mean ratings of overall satisfaction $F(2, 81) = 49.300, p < .001$, partial eta squared = .549. The students reported a significantly higher overall level of satisfaction at the College Academy ($M = 6.45, SD = 1.027$), compared to the high school ($M = 4.11, SD = 2.030$), and the university ($M = 5.49, SD = 1.374$), $p < .001$.

**Student Relationships**

Questions 3a, 9a, and 20a of the survey asked participants to rate the quality of their relationships with other students at the high school, College Academy, and university. The responses ranged from a low score of 1 indicating “Unfriendly, Unsupportive, Sense of Alienation” to a high score of 7 indicating “Friendly, Supportive, Sense of Belonging”. There was a significant difference in the mean ratings of the quality of the relationships with other students $F(2, 81) = 21.365, p < .001$, partial eta squared = .345. The students reported a significantly higher quality of relationships with other students at the College Academy ($M = 6.13, SD = 1.341$), compared to the high school ($M = 4.78, SD = 1.874$), and the university ($M = 5.3, SD = 1.702$), $p < .001$. 
Faculty Relationships

Questions 3b, 9b, and 20b of the survey asked participants to rate the quality of their relationships with faculty members at the high school, College Academy, and university. The responses ranged from a low score of 1 indicating “Unavailable, Unhelpful, Unsympathetic” to a high score of 7 indicating “Available, Helpful, Sympathetic”. There was a significant difference in the mean ratings of the quality of the relationships with faculty $F(2, 80) = 53.732, p < .001$, partial eta squared = .573. The students reported a significantly higher quality of relationships with faculty at the College Academy ($M = 6.38, SD = 1.193$), compared to the high school ($M = 4.57, SD = 1.743$), and the university ($M = 4.74, SD = 1.748$), $p < .001$.

Administrative Personnel Relationships

Questions 3c, 9c, and 20c of the survey asked participants to rate the quality of their relationships with administrative personnel and offices at the high school, College Academy, and university. The responses ranged from a low score of 1 indicating “Unhelpful, Inconsiderate, Rigid” to a high score of 7 indicating “Helpful, Considerate, Flexible”. There was a significant difference in the mean ratings of the quality of the relationships with administrative personnel, $F(2, 160) = 73.406, p < .001$, partial eta squared = .479. The students reported a significantly higher quality of relationships with administrative offices and personnel at the College Academy ($M = 6.41, SD = 1.222$), compared to the high school ($M = 3.75, SD = 1.8959$), and the university ($M = 4.00, SD = 1.917$), $p < .001$. 
Qualitative Analysis of Open-ended Survey Items

Data for the qualitative part of the study were collected through the open-ended questions in the survey instrument. Responses to open ended survey questions revealed additional social and academic aspects of the students’ matriculation from the high school, the College Academy, and the university.

High School Experiences

When asked, “What did you miss most about your regular high school (9th & 10th grade)?”, an overwhelming majority of responses indicated that they missed the social experiences of their regular high school, including friends and other extracurricular activities such as sports, clubs, band, prom, and other social activities. One female student responded, “I missed the activities, the sports, the dances, and the prom. I was a member of the marching band, so I missed the football games and performing the most.” Another student mentioned, “Out of all the aspects of my regular high school, I would say that I most missed the friends that I had already made there, but I made equally as many, if not more friends at College Academy.” Nearly one-third of the participants responded that they missed nothing about their regular high school. One student offered the following comment about her experiences, “I didn't miss anything. In high school, I was fairly quiet and spent the majority of my time reading books in the school library.”

Responses to the question “What did you miss the least about your regular high school?” generally made reference to one or several of the following categories: students, schedules, crowded classes, and strict rules. Approximately one third of the participants expressed a dislike of cliques and peer pressure in the student body, as well as a dislike of students who were unmotivated, immature, and did not care about learning. Other themes
that emerged from the responses to this question were a general dislike of the rigid schedule and overcrowding of regular high school.

**College Academy Experiences**

Question number 6 of the survey instrument asked students to rank, in order of most influential to least influential, seven items were factors in their decision to enroll in the College Academy. Free college was the most influential in the students’ decision to enroll in the College Academy, followed by the opportunity to earn college credit while in high school, and to get out of regular high school. The factors, in order of most influential to least influential, were:

- Free college
- The opportunity to earn college credit while in high school
- Get out of regular high school
- Wanted to be part of something different
- Parental pressure
- Friends
- Teachers/Guidance Counselors

Responses to the question “What did you like most about the College Academy?” referred to various social and academic aspects of the College Academy falling into the following dominant themes: relationships with students, faculty, and staff, the mature environment of the College Academy, and the opportunity to earn college credit while still in high school. Nearly half of the respondents indicated that friendships and relationships with students, faculty, and staff were what they liked most about the program. Students mentioned that the College Academy was like a family, a close-knit
and intimate environment. Students liked the small size of the program and being able to form close friendships. Approximately one third of the participants indicated that they liked the mature environment and relaxed atmosphere of the program as well as the freedom and flexibility in scheduling classes. About one fourth of the participants indicated that they liked the opportunity to earn the first two years of college for free while getting a head start on their four year degree. Many students commented on the positive impact of the College Academy.

One student shared the following comment about her relationships with friends and faculty as well as the size and atmosphere of the College Academy program:

I loved the relationships that I had with my friends and with the faculty. Everyone knew everyone because the program was so small. And because everyone came into the program with high standards and high expectations, there was a great atmosphere for learning.

A male student offers the following comment about his experience with the dual enrollment program:

I loved almost everything about CA! I loved the ability to set my own track, that my college was free, that the relationships among classmates--and between students and faculty--were more intimate, and the feeling that I was getting a jump-start on my adult life.

One student comments on her “journey of self discovery” as well as caring faculty and staff:

The office was like walking into your home. Faculty and staff are welcoming, helpful and loving. The students are given ample opportunity to ask questions and
receive help from instructors when they do not understand the course's subject matter. Teachers truly care about the students. Students are addressed by first and last name even by the principal. Students are not merely numbers. Teachers are genuinely interested in a student's life, plans and successes. I felt as though the College Academy is more than an opportunity to earn an education, you leave with meaningful friendships and a greater understanding of others and yourself. It is a journey of self discovery that gave me the best two years of my life so far.

Another student offers the following comment about her lasting relationships:

When I got to the College Academy, I quickly found my niche. I made lasting friendships and I loved the sense of freedom we all had. We could go off campus for lunch, we could schedule classes we were interested in and we felt rewarded for being top students. I also liked that the professors took the time to really get to know us and I'm thankful for their dedication to us. I still keep in contact with many of my friends and some of my professors.

Participants were asked to respond to the questions, “What did you like the least about the College Academy?” The most popular response to this question was “nothing” from nearly one third of the participants. Other major themes that dominated the responses were related to missing out on extra-curricular activated and some guidance issues. Nearly one third of the students reported that they missed out on many activities from a regular high school including sports, clubs, activities, and prom. Approximately one fourth of the participants indicated that they had issues with guidance. Some felt they were too young to choose a career would have liked more direction in picking a major and choosing the right prerequisite courses needed for transferring credits to the
university. The following responses describe guidance issues related to the College Academy experience. A female student describes issues related to entering the College Academy at a young age:

Every aspect of my experience at the College Academy was incredibly positive. The only thing that I can see as being a problem for me personally was that I was still so young when I started the program that I did not quite know what direction I wanted my life to take academically. As a result I did not necessarily make the best decisions when choosing classes…

Another female student adds this comment about taking the right pre-requisites:

I really wish that the College Academy truly focused on a “seamless” transfer from community college to university. What I mean by “seamless” is stress certain aspects of which courses are required for specific majors. For example, if a student is interested in engineering, the CA should immediately push course tracking towards general engineering pre-requisites. If the student is unsure of a particular major from the beginning, the advisors should guide application to universities as a freshman versus a transfer student.

Responses to the question “What changes would you recommend in the College Academy?” generally fell in line with responses to the previous question. The three most common responses referred to the following: no recommended changes, more activities, and better guidance. Students recommended providing more extra-curricular activities including having fieldtrips, a prom, and a yearbook. Students recommended more assistance in choosing a major, picking courses, career advising and providing students with a better understanding of the prerequisites needed when transferring to a state
university. One female student suggested the following to help students in making the transition to a university:

I might have the professors and administrators have a “what to expect at your university” workshop that lets students in on campus life. I changed my major and ended up graduating in three years instead of two, which I'm very thankful for. I want future students to know that college life is exciting, memorable and even sometimes necessary for future growth so they don't cut it short because they've had a head start.

Another student commented on what is was like for him to accelerate through the university, and taking time off:

I think any incoming students need to realize that, even though they start college rather early, they don't need to finish their education so quickly. They can take a break--realize that education goes beyond courses, theses, and degrees. I received my B.A. at 19, and realized I needed some time away from school before I returned for my Master's degree. It's okay to excel--and to be quicker, faster, better--but it's also okay to take some time off.

Transfer Experiences

One third of the respondents indicated that they did face challenges in transferring to a university. Of the types of challenges describes, a major challenge was in grade level classification. Having graduated from the College Academy with a high school diploma and an associate’s degree, respondents indicated that there was confusion in placement at the university as a freshman or as a junior. Some students were admitted as freshmen and later updated to junior status. Some students tried to enter as juniors but did not meet the
prerequisites for their chosen major at the university. Some students indicated that this affected housing, majors, scheduling, and eligibility for scholarships.

One student offers the following comment about her challenges in terms of class ranking when transferring to a university:

The university that I transferred to was more than happy to accept me because of my age and how well I had done in school, but there was a lot of grey area of how I was to be “ranked” at the school. When I applied for on-campus housing or anything else on campus, I wasn’t sure if I was labeled a freshman or a junior. It created a little bit of confusion.

Another female student comments on the challenging social aspects of entering the university as a junior at a young age:

I wasn’t the same age as the people I was taking classes with and it made socializing a little more difficult. Plus, when I did start [to] hang out with people my own age they seemed a little resentful of my credits.

Another student discusses her challenges in transferring to the university after completing the College Academy program:

It was a bit uncomfortable being 18 and a junior at [the university]. I felt young compared to my classmates but overcame it when I realized I was just as smart and capable of handling the classes as they were.

Another student comments on the pressure of deciding her future as well as the difficulty in finding her fit in the university.

I felt pressure to figure out what to do with the rest of my life at 18. … Also, my roommate and I (we both went to the College Academy) had a hard time finding
our fit – we weren’t really freshman because we were taking junior classes and we weren’t really juniors because we were very naïve. But, we learned through it all, so it was fun as well.

*University Experiences*

Participants were asked to respond to questions about their likes and dislikes of the university. Although there were a variety of responses, there were no consistent major themes. Some students that chose to attend a university close to their home commented that they liked the fact that they were able to live at home while attending the university. Other students commented on enjoying the freedom to choose their own classes. Some of the participants mentioned that they disliked dealing with the parking problems at the university.

*Missing Out*

Participants were asked to respond to the following question: How do you feel about missing out on a “traditional high school experience”? A majority of the respondents did not feel as if they missed out on anything at all. For some participants indicated that they did miss out on some of the traditional activities, they felt that their non-traditional experiences were worth the sacrifice. One female student felt like she did not miss out at all. She states:

I don’t feel like we missed out on anything. We had our “dances” and “get togethers”…I feel like I had a lot more freedom and flexibility than a traditional high school student, so it’s really the traditional student that’s missing out.

Another female student adds, “At the moment it made me sad, but looking back I feel like the traditional high school experience was replaced with something much more
valuable.” A male student simply states, “My memories of high school are just like those of someone from a traditional high school. I didn’t miss a thing.” Another female student did not feel bad about missing the traditional experience. She states, “I think it was the best decision I could have made. The benefits of this program outweighed what I missed in the traditional high school experience.”

The responses to the survey painted a positive description of the experiences of the students who participated in the College Academy. The following comments capture the essence of the students’ experiences. A female student talks about getting a headstart on college, about building relationships, and about the College Academy being a great opportunity:

I loved getting a headstart on my college career. It was so great to pick my own schedule. You need to have a lot of self-discipline and be a responsible person to get along well at the College Academy. It was a great transition from high school to college … Also, since the classes were smaller, we really built strong student-student and teacher-student relationships … The College Academy was a fantastic opportunity and I recommend it to everyone.

Another female student highly recommends the program:

I am constantly recommending the College Academy program to Freshman and Sophomores I know because I cannot think of a better path to take. Applying for and attending the College Academy was one of the best decisions I have ever made and I excitedly continue my educational endeavors knowing full well that I have made the best use of my time and resources that were available to me.

Another female student comments on her memorable experiences:
College Academy was one of the most memorable experiences I have ever had and I owe a special thanks to the CA staff for giving me that opportunity. How many people can say that at 17 years old they had their Associate's degree? Or even at 20, will have their Bachelors? … I love the College Academy.

Research Question #3 – Student Characteristics

The researcher further posed the following research question related to the characteristics of students who have participated in the College Academy dual enrollment program: Who participates in the College Academy program and what academic programs do they pursue?

For Cohort A, the first class of the College Academy, there were a total of 111 students: 68% females and 32% males. For Cohort C, the second class of the College Academy, there were a total of 164 students: 59% females and 41% males. See Table 12 in Appendix D for a breakdown of the gender and ethnicity of College Academy Students in Cohort A and Cohort C.

The College Academy students pursued a variety of majors while at the community college and university. While at the community college, the top four majors were Business (19%), Liberal Arts (16%), Pre Medical (15%), and Psychology (7%). See Table 13 in Appendix D for a complete list of majors pursued by College Academy Students in Cohorts A and C. For College Academy students in Cohort A and Cohort C, the top four majors pursued at the university level were Business (25%), Sciences (13%), Health Sciences (12%), and Psychology (11%). See Table 14 in Appendix D for a complete list of majors pursued by College Academy students at the university level.
Chapter Summary

This chapter presented the analysis of the data retrieved from the academic records and survey instrument to answer the research questions concerning the academic success and social experiences of students who participated in the College Academy, a two-year intensive dual enrollment program.

Academic records were used to compare College Academy students with traditional community college transfer students. The data from the academic records revealed that College Academy students had higher community college grade point averages, higher associate’s and bachelor’s degree completion rates, and faster time to associate’s degree completion.

The responses on the survey instrument administered to College Academy students revealed experiences of the College Academy when compared to the high school and university. The students were more satisfied with the College Academy and reported better quality of relationships with students, faculty, and administration. Responses to open ended questions on the survey instrument revealed that the students did miss some of the extra-curricular activities of a traditional high school, but they liked the mature environment, the opportunity to earn college credit, and the relationships that were formed during their time at the College Academy. To improve the dual enrollment program, participants suggested providing more extra-curricular activities and providing specific guidance to address the unique challenges of accelerating through higher education through an intensive dual enrollment program.
Chapter 5
Summary, Recommendations, and Conclusion

This chapter provides a summary of the study of an intensive dual enrollment program. A statement of the problem, a summary of the findings, conclusions, and recommendations for future study are presented. The chapter then presents an integrated review of the findings of the academic and social experiences of the dual enrollment students. This chapter concludes with recommendations to policy makers and recommendations for future study regarding dual enrollment programs.

Summary of the Study

This study examined the academic performance and social experiences of students who participated in the College Academy, a two-year intensive dual enrollment program. The study looked at the academic success of these students in terms of community college and university grade point averages, associate’s and bachelor’s degree completion rates, and the time it took these students to earn the associate’s and bachelor’s degree. Two cohorts of College Academy students were compared to two cohorts of traditional community college students to determine if significant differences existed between the cohorts in terms of grade point averages, degree completion rates, and time to degree completion.

Further, the researcher used a survey to examine the social experiences of the students who participated in the College Academy, the two-year intensive dual enrollment program. The two cohorts of College Academy students were asked to
complete a survey that looked at various social aspects of their experiences as they matriculated through their regular high school, the dual enrollment program, and the university. Selected items on the survey asked the participants to rate their involvement in co-curricular activities, level of satisfaction, and the quality of their relationships with other students, faculty, and staff. The responses to these questions were analyzed to determine if there were significant differences in ratings at the high school, dual enrollment program, and the university. Open ended survey items revealed more about the social experiences of the dual enrollment students by soliciting the students’ likes and dislikes of their regular high school, the dual enrollment program, and the university.

Statement of Problem

Dual enrollment programs provide high school students with the opportunity to earn college credits. There is currently a push to expand dual enrollment programs in order to boost bachelor’s degree attainment rates (Adelman, 2006). The College Academy represents a type of two-year intensive dual enrollment program which enables students to earn their high school diploma and their associate’s degree at the same time. Some of the concerns of intensive dual enrollment programs are issues of students “missing out” on a traditional high school experience (Amos, 2005; Behrendt, 2003) as well as adversely affecting the student’s admission status at selective universities (Miller, 2005). Previous studies have explored various aspects of dual enrollment, yet few studies address the long term academic and social implications of intensive dual enrollment programs. The problem addressed in this study was how participation in an intensive dual enrollment program affects academic performance and social experiences in higher education. This study looks at the performance and experiences through the 5th and 6th
year after starting the dual enrollment program and recommends future research to extend beyond this timeframe.

Summary of Findings

Academic Success

To determine the impact of an intensive dual enrollment program on academic success, the researcher examined data from four cohorts of students; two cohorts of students from the College Academy, an intensive dual enrollment program, and two cohorts of traditional community college students. The analysis of the first cohort of College Academy students compared to the first cohort of traditional community college transfer students yielded similar findings as the analysis of the second cohort of College Academy students compared to the second cohort of traditional community college transfer students.

Analysis of academic data revealed significant differences in the academic performance of College Academy students compared to traditional community college transfer students. College Academy students typically outperformed their traditional classmates. College Academy students had higher community college grade point averages, higher associate’s degree completion rates, and shorter time to associate’s degree completion. A higher percentage of College Academy students went on to a four year university compared to traditional community college transfer students.

College Academy students had significantly higher bachelor’s degree completion rates, yet, there was little difference in the university grade point averages for College Academy students compared to traditional transfer students. This may be a result of transfer shock experienced by both College Academy and traditional transfer students.
and should be explored in more detail in future studies. Further, there was little difference in time to bachelor’s degree completion for College Academy students compared to traditional community college students. This result may change with time since the data collection took place 6 years after the initial enrollment in the community college for Cohorts A and B and 5 years after initial enrollment for Cohorts C and D. Future studies should examine persistence for dually enrolled students compared to traditional students allowing for longer duration after initial enrollment.

Social Experiences

To determine the impact of the College Academy, a two-year intensive dual enrollment program, on students’ social experiences, the researcher requested students of the first two graduating classes of the College Academy to participate in an online survey. The responses from the survey were used to determine if there were significant differences in the students’ levels of involvement in co-curricular activities, satisfaction, and quality of relationships with students, faculty, and staff at the high school during the 9th and 10th grade, at the College Academy, and at the university. Responses to open ended survey items revealed more detailed descriptions of the social experiences of the College Academy students. The participants rated their overall satisfaction with the College Academy program higher than their overall satisfaction at the high school and university. The participants rated the quality of their relationships with students, faculty, and administration higher while at the College Academy compared to the quality of their relationships while at the high school and university. The dual enrollment students that participated in this survey generally reported more positive experiences, in terms of quality of relationships and satisfaction with the program, while at the College Academy.
when compared to their experiences while at the high school and their experiences while at the university.

Responses to open ended questions on the survey instrument revealed that the students did miss some of the extra-curricular activities of a traditional high school, but they liked the mature environment, the opportunity to earn college credit, and the relationships that were formed during their time at the College Academy. To improve the dual enrollment program, participants suggested providing more extra-curricular activities and providing better guidance to address the unique challenges of accelerating through higher education through an intensive dual enrollment program.

Contribution to the Literature

This study contributes to the literature by examining the academic performance of students who participated in an intensive dual enrollment program through the 5th and 6th year after the initial enrollment in the dual enrollment program. Additionally, this study provides descriptions of the social experiences of the intensive dual enrollment students as they transitioned from a traditionally structured high school, to the two-year dual enrollment program housed on a community college campus, and then to the university. As with all studies, this study has its limitations, but the findings do reveal positive outcomes with regard to academic success and social experiences of dual enrollment students.

The intensive dual enrollment students in this study had significantly higher community college grade point averages compared to traditional community college students, supporting the results of past studies (Di Puma, 2002; Peng 2003) of students who participated in dual enrollment programs.
This study also found that the intensive dual enrollment students had significantly higher rates of associates’ and bachelors’ degree completion compared to traditional community college students supporting past literature (Boswell, 2001; Cesta, 2003) regarding degree completion rates. Nearly 47% of the first cohort of students to attend the College Academy, enrolling in the Fall of 2001, completed their bachelor’s degree within six years. This percentage exceeds the percentage found in a previous study (Bailey et al., 2004).

The responses to the survey revealed that some intensive dual enrollment students did experience challenges when transferring to the university. This finding supports prior work (Glass & Harrington, 2002; Laanan, 2001) regarding the complex adjustment process for transfer students. By a comparison of community college grade point averages ($M=3.22$, $SD=.437$) with university grade point averages ($M=2.88$, $SD=.912$) for Cohort A, the first cohort of College Academy students, a decline in grade point averages is observed. A similar reduction in grade point averages in Cohort C, the second cohort of College Academy students, was also observed. This may be a result of transfer shock and should be further examined in future studies.

In addition to positive academic outcomes for the dual enrollment students, this study revealed positive social outcomes as well. This study found that the students who participated in the intensive dual enrollment rated the quality of their relationships with students, faculty, and administration higher while enrolled in the dual enrollment program when compared to their experiences at the high school and university. The study also found that the students rated their overall satisfaction with the dual enrollment program higher than their overall satisfaction with their traditional high school and
university. These findings, coupled with the previous stated findings of academic success of the dual enrollment students, provide support for Astin’s (1993b) study that stated that the quality of the college experience is affected by interaction with faculty and peers.

In this study, the candid responses, by the intensive dual enrollment students regarding their social experiences, paint a positive picture of their experiences and challenges the notion of dual enrollment students missing out on a traditional high school experience. Their descriptions painted a picture of the College Academy program as a close-knit family environment, a place where the students called their home base. This may have attributed to the positive academic experiences of the students and provide support for studies of student engagement (Kuh, 2001; Pascarella & Terenzini, 1991).

The intensive dual enrollment students in this study had significantly higher rates of bachelor’s degree completion. The average time from the initial enrollment in the College Academy for the bachelor’s degree completion for the first and second cohort of intensive dual enrollment students was 4.46 years and 4.29 years respectively. Studies (Adelman, 2004; Boswell, 2000; Education Commission of the States, 2001) have examined the affect of dual enrollment on time to bachelor’s degree completion. Studies measure time-to-degree completion from the date of initial college enrollment, typically after high school graduation. Since the students in the College Academy begin working towards an associate’s degree through the dual enrollment program at the beginning of their junior year in high school, a full two years earlier than the traditional high school student, the average time to earn a bachelor’s degree may be adjusted. When accounting for this difference, the average time for the intensive dual enrollment students to earn a bachelor’s degree is roughly 2.5 years, as measured from the high school graduation to
the date the bachelor’s degree is awarded. These measures may help to reinforce the value of intensive dual enrollment programs as an accelerated pathway to the four-year degree.

Integrated Review of the Findings

This section presents a chronological description of the College Academy students’ academic and social experiences as they relate to the conceptual framework presented in Chapter 1 of this dissertation. The students of the College Academy made the transition from a traditional high school for 9th and 10th grade, combined the last two years of high school with the first two years of college while at the College Academy, then transitioned to a four-year institution to pursue a bachelor’s degree. The conceptual framework, adapted from Berger and Malaney (2003) and Astin’s (1993) Input-Environment-Outcome (I-E-O) model, helped to identify variables through the students’ matriculation through higher education. See Figure 2 for a model representation of the conceptual framework.

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<thead>
<tr>
<th>Inputs (I)</th>
<th>Educational Environment (E)</th>
<th>Outputs (O)</th>
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<tr>
<td><strong>Student Entry Characteristics</strong></td>
<td><strong>College Academy Experiences</strong></td>
<td><strong>Outcomes</strong></td>
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<tr>
<td>• Gender, Ethnicity</td>
<td>• Involvement in co-curricular activities</td>
<td>• Satisfaction</td>
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<td>• Placement Test Scores</td>
<td>• Quality of relationships</td>
<td>• University GPA</td>
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<tr>
<td>• Involvement in high school</td>
<td>• Satisfaction w/ College Academy</td>
<td>• Bachelor’s degree completion</td>
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<tr>
<td>• Quality of relationships</td>
<td>• Involvement in co-curricular activities</td>
<td>rates</td>
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<tr>
<td>• Satisfaction w/ high school</td>
<td>• Quality of Relationships</td>
<td>Time to bachelor’s degree</td>
</tr>
<tr>
<td>• Reason for choosing Academy</td>
<td>• Associate’s degree completion rates</td>
<td>completion</td>
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*Figure 2. Conceptual Framework.*
To begin, the study looked at the characteristics of the students at the transition from the high school during the 9th and 10th grade to the College Academy. A total of 275 College Academy students were identified to be part of the study with 62% female students and 38% male students. The ethnic breakdown of the College Academy sample was 55% white, 20% Hispanic, 19% black, and 7% Asian. A comparison group of 258 traditional community college transfer students was purposely selected to have similar gender and ethnicity breakdowns and similar college entrance exam placement scores. The comparison group gender breakdown was 61% female and 39% male and the ethnicity breakdown of 53% white, 21% Hispanic, 19% black, and 7% Asian. To be included in the study, the College Academy students and the comparison group had to meet minimum score requirements on either the SAT, ACT, or CPT.

Additionally, the College Academy students were requested to complete an online survey that asked them to reflect on their experiences during the 9th and 10th grade at their regular high school, during their time at the College Academy, and during the time at the university. Of the 275 College Academy students, 93 students participated in the survey representing a 34% response rate.

High School Experiences

When responding to survey items about the high school experience during the 9th and 10th grade, the average rating scores for overall satisfaction and the quality of relationships with students, faculty, and administration was lower compared to the College Academy and university. The average rating the level of involvement in co-curricular activities was the highest at the high school compared to the College Academy and university. Responses to open ended questions revealed that the students typically
missed their friends and extracurricular activities of their regular high school but did not
miss the strict rules, inflexible schedule and overcrowded halls and rooms.

*College Academy Experiences*

After their 10th grade year, the students left their “regular” high school, a
traditionally structured four-year high school, to attend a two-year intensive dual
enrollment program called the College Academy. The decision to enroll in the College
Academy was influenced by numerous factors. The students who responded to the survey
were asked to rank, in order from most influential to least influential, seven possible
factors influencing the decision to enroll in the College Academy. The most influential,
as ranked by the student participants, were the chance to earn free college credit while
still in high school and the desire to get out of “regular” high school.

The academic success and social experiences of College Academy students were,
for the most part, positive. College Academy students had significantly higher
community college grade point averages, higher associate’s degree completion rates, and
faster time to associate’s degree completion when compared to traditional community
college students. The average ratings for overall satisfaction and quality of relationships
with students, faculty, and administration were the highest at the College Academy
compared to the high school and the university. The students indicated that they liked
earning free college credit and enjoyed the close relationships they had with other
students, faculty, and administration. The atmosphere of the College Academy was
considered to be a close-knit family environment. Although some students indicated that
they missed the extracurricular activities of their traditional high school, most students
expressed satisfaction with the College Academy experience. When reflecting on his experiences of the College Academy, one student offered the following sentiments:

The office was like walking into your home. Faculty and staff are welcoming, helpful and loving. The students are given ample opportunity to ask questions and receive help from instructors when they do not understand the course's subject matter. Teachers truly care about the students. Students are addressed by first and last name even by the principal. Students are not merely numbers. Teachers are genuinely interested in a student's life, plans and successes. I felt as though the College Academy is more than an opportunity to earn an education, you leave with meaningful friendships and a greater understanding of others and yourself. It is a journey of self discovery that gave me the best two years of my life so far.

Similar opinions were shared by many of the College Academy students. The small, intimate size of the College Academy was considered by many students to attribute to the success of the dual enrollment program. College and school administrators that are considering implementing and/or expanding intensive dual enrollment options for their students, should determine the optimal size of the program that would contribute to a nurturing environment that promotes student success.

Missing Out

To participate in the College Academy, students left their traditional high school after their 10th grade year to become part of a new two-year intensive dual enrollment program housed on a community college campus. The College Academy lacks most of the extracurricular activities of a traditional high school. The College Academy has no football team, cheerleading squad, swim team, or debate team. There are no homecoming
dances, proms, pep rallies, or school yearbooks. In a sense, College Academy students miss out on the “traditional high school experience”. Students surveyed were asked to comment on the notion of missing out. Respondents generally indicated that they did not feel as if they missed out on anything. One student offered the following comment:

I don’t feel bad about it at all. I think it was the best decision I could have made. The benefits of this program outweighed what I missed in the traditional high school experience.

After completing two years of an intensive dual enrollment program, 91% of the College Academy students earned their associate’s degree and high school diploma at the same time. At the time this study was conducted, nearly all College Academy students (98%) had earned their associate’s degree. In the comparison group of traditional community college students, only 38% had earned their associate’s degree.

Transfer Experiences

Many of College Academy students (76%) and fewer traditional community college students (37%) transferred to one of Florida’s public universities. One third of the College Academy students surveyed indicated that they experienced challenges when transferring to the university. The transfer challenges faced by the College Academy students were generally a result of the unique characteristics of graduates of this intensive dual enrollment program. Having graduated from the College Academy with a high school diploma and an associate’s degree, respondents indicated that there was confusion in placement at the university as a freshman or as a junior. Some students were admitted as freshmen and later updated to junior status.
University Experiences

This study further examined the social experiences of College Academy students after transferring to a state public university in Florida. Of the students surveyed, the average rating of the level of involvement was the lowest at the university compared to the high school and College Academy. The average ratings for the quality of relationships with students, faculty, and administration at the university were higher than the quality ratings at the high school level, but lower than the quality ratings at the College Academy.

Outcome

College Academy students had higher bachelor’s degree attainment compared to traditional community college students. The average time to bachelor’s degree completion for College Academy students was about the same as the time for traditional community college transfer students. While at the community college, College Academy students’ GPAs were significantly higher than traditional community college transfer students. This trend did not continue at the university. While at the university, there was not a significant difference in grade point averages for College Academy students compared to traditional community college transfer students.

For nearly all students, the College Academy was a positive academic and social experience its students. One student expresses her satisfaction with the program:

I loved getting a headstart on my college career. It was so great to pick my own schedule. You need to have a lot of self-discipline and be a responsible person to get along well at the College Academy. It was a great transition from high school to college … Also, since the classes were smaller, we really built strong student-
student and teacher-student relationships … The College Academy was a fantastic opportunity and I recommend it to everyone.

When asked “If you could start over again, would you go to the College Academy?” nearly all students (97.8%) surveyed said that they would, with 86.4% answering “Definitely yes” and 11.4% answering “Probably yes”.

Recommendations to Policymakers

Policymakers and education administrators with an interest in dual enrollment programs should consider the following recommendations for implementing and/or expanding dual enrollment programs. The recommendations are based on the findings from academic data as well as candid responses of students who participated in an intensive dual enrollment program.

When offering dual enrollment programs on the college campus, designate a location on the campus where dual enrollment students meet with administrators, guidance counselors, faculty, and other dual enrollment students. The location should maximize interaction with students, faculty, and administration in order to enhance the quality of the students’ relationships. Determine the optimal size of the program that would contribute to a nurturing environment that promotes student success. The program should not be too large so as to avoid the students being “just a number.” The students should report regularly and be greeted in a personal way. Ideally, the location should be a place where the students can call their “home base” on the college campus.

Offer an orientation for incoming dual enrollment students and their parents that includes a campus tour of the classroom buildings, office locations, book store, cafeteria, bus stop, library, computer labs, learning centers, and student activities. Students who
have already gone through the dual enrollment program should serve as tour guides. The orientation should also include presentations by former dual enrollment students, professors, and guidance counselors and allow for time for question and answer sessions.

Dual enrollment students typically give up on many traditional activities in order to pursue dual enrollment. Administrators and students should determine ways to incorporate some of the extra-curricular activities and other social activities of a traditional high school. As new intensive dual enrollment programs are formed, the schools should start their own traditions and determine ways to promote school spirit, such as a school yearbook, dances, and other social activities.

Students who plan on participating in intensive dual enrollment programs should receive proper guidance in order to make an informed decision. The student should be fully aware of expectations of dually enrolled students and know that intensive dual enrollment programs do not fit the notion of the traditional high school. An intensive dual enrollment programs may have limited opportunities for involvement in traditional high school sports, clubs, and activities, and may be suitable for all students.

Guidance throughout the program is crucial for dual enrollment students. Students who participate in intensive dual enrollment programs may earn their associate’s degree and high school diploma at the same time. When selecting dual enrollment courses, the students should be aware of university admissions requirements so that all prerequisite courses are completed prior to transferring to the university. University admissions officers should become aware of the unique characteristics of the intensive dually enrolled student. Accommodations should be made to ease the transition of the dually enrolled student into the university and ensure proper placement at the university level.
Finally, policymakers should continue to promote and expand dual enrollment and encourage more students to participate, particularly students from underrepresented populations. This study has shown positive outcomes for students in both academic and social experiences. Students should be aware of the programs, even at a young age, so that they could determine if an intensive dual enrollment program is right for them.

Recommendations for Future Study

This study shows promising outcomes for students who participate in an intensive dual enrollment program housed on a community college campus. Further study is recommended. A revised conceptual framework (see Figure 3) is presented to identify additional variables to be included in future studies of dual enrollment programs. The conceptual framework is adapted from Berger and Malaney (2003) and incorporates the Input-Environment-Outcome model (Astin, 1993a). The framework could be used as a model for future studies of a variety of different types of dual enrollment programs.
<table>
<thead>
<tr>
<th>Inputs (I)</th>
<th>Educational Environment (E)</th>
<th>Outputs (O)</th>
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<tbody>
<tr>
<td>Student Entry Characteristics</td>
<td>Dual Enrollment Experiences</td>
<td>Transfer Readiness</td>
</tr>
<tr>
<td>• Involvement in activities</td>
<td>• Involvement in activities</td>
<td>• GPA</td>
</tr>
<tr>
<td>• Quality of relationships</td>
<td>• Quality of relationships</td>
<td>• Associate’s degree completion rates</td>
</tr>
<tr>
<td>• Satisfaction w/ school</td>
<td>• Satisfaction w/ program</td>
<td>• Type of degree or certificate</td>
</tr>
<tr>
<td>• Placement Test Scores, GPA</td>
<td>• Program setting on college campus, high school, or online</td>
<td>• Transfer challenges</td>
</tr>
<tr>
<td>• Gender, Ethnicity</td>
<td>• Size of program</td>
<td>• Orientation</td>
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<td>• Parental factors</td>
<td>• Cohort vs. individual</td>
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<tr>
<td>• Socio-economic status</td>
<td>• Guidance</td>
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<tr>
<td>• Type of school</td>
<td>• Program of study, major</td>
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<tr>
<td>• Reason for choosing dual enrollment</td>
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<td>• Dual enrollment orientation</td>
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<td>• Guidance</td>
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Figure 3. Revised Conceptual Framework.
In terms of the first component of the conceptual framework, which addresses the inputs or student entry characteristics, future studies should account for additional factors such as socio-economic status and parents’ level of education that may correlate with student performance in a dual enrollment program. Additional variables can be explored within the educational environment, the second component of the conceptual framework. Future studies should examine the dual enrollment program setting, by comparing the experiences of students who participated in dual enrollment classes offered at the high school, online, or on a college campus. Studies of dual enrollment as a pathway to the four year degree should examine environmental factors of the university environment such as whether the student attends a public or private university, in-state or out-of-state, and whether the student is commuting or living on campus.

Future studies of dual enrollment programs should look at students who participated in dual enrollment as singletons, not part of a cohort of students. These students would not have the inherent support structure of programs for cohorts of students. Studies should be conducted to explore the challenges of singleton dually enrolled students.

This study looked at students who participated in a two-year dual enrollment program. With expanded dual enrollment offerings some students are earning as much as three years of college credit. Future studies should look at the impact of even faster acceleration through high school and college for younger students.

The analysis of academic data in this study showed that even though dual enrollment students typically had higher GPAs at the community college, their GPAs
were lower at the university. Future studies should look at the notion of transfer shock as it relates to dual enrollment students.

Dual enrollment programs are appealing to students and parents because of the opportunity to earn free college credits. Future studies should look at the long term cost analysis of dual enrollment programs. This type of study would include school district and college budgets for dual enrollment programs. Cost analysis studies could also look at the overall cost of attendance for the accelerated dual enrollment student compared to the traditional student.

Ultimately, to address the final component of the conceptual framework, the outcomes, studies should be conducted to explore the students’ experiences beyond the four year degree. Long term studies should examine the impact of students who participate in dual enrollment programs, with the opportunity to earn a bachelor’s degree by the time they are 20 years old, and enter the work force earlier than their peers. Additional factors to consider should be job placement, income, career satisfaction, career changes, as well as involvement in professional organizations. Long term students should also address the students’ educational endeavors beyond the four year degree by looking at graduate program enrollment and involvement in alumni organizations.

Conclusion

This chapter presented the findings and conclusion of the study of the academic and social experiences of students who participated in a two-year intensive dual enrollment program. The study involved an analysis of academic data and found that the dually enrolled students had higher community college GPAs, faster time to associate’s degree completion, and higher associate’s and bachelor’s degree completion rates when
compared to traditional community college transfer students. More detailed descriptions of the dually enrolled students’ social experiences were collected through the use of a survey. The analysis of the survey results revealed that the dually enrolled students had positive social experiences, reporting higher levels of satisfaction and higher quality of relationships with other students, faculty, and staff while participating in the dual enrollment program compared to the students’ experiences while at the traditional high school and the university. Based on the findings of the study, policymakers and education administrators are encouraged to continue support for dual enrollment and increase access to dual enrollment by expanding programs based on models that have been proven successful. The researcher urges further study of dual enrollment programs in an effort to promote dual enrollment as a viable alternative to the traditional high school experience.
References


Florida Board of Education (2003, December). *Study on acceleration mechanisms in Florida*. Submitted to the Governor and the Legislature in fulfillment of the requirements in Section 1007.27, Florida Statutes.


Midcap, R. D. (2002). Dual enrollment students’ perceptions regarding academic experiences, social experiences, and overall program satisfaction at Chesapeake College (Doctoral dissertation, Wilmington College, 2002). (UMI No. 3071344)


Community College and University Experiences of High School Dual Enrollment Students  
Survey Questions

The purpose of this study is to describe the social experiences of students who participated in an intensive dual enrollment program. The primary focus of this study is to describe the students’ relationships with other students and faculty members, levels of involvement in co-curricular activities, challenges faced as dual enrollment students, and satisfaction with the dual enrollment program.

You will be asked about your experiences in transitioning from a traditional high school, to the College Academy, and then to the university. The survey may take approximately 30 minutes to complete and may be completed in either written or electronic form. Your candid responses will help provide useful information for improving and expanding dual enrollment programs.

Your participation in this study is voluntary. All of the results of this study will be kept confidential and the results and information in this study will not be released in any way that may reveal the identification of participants without the participant’s lawful agreement.

If you wish to complete this form online, please go to the website: www.surveymonkey.com/collegeacademy

High School Experiences - 9th & 10th Grade

In this section of the survey, you will be asked to respond to questions as they relate to your high school experiences during the 9th and 10th grade.

1. Mark the box that best represents your level of involvement in co-curricular activities (such as student government, clubs, sports, etc.) during the 9th & 10th grade.

   Not Involved ▼
   □ □ □ □ □ □ □
   1 2 3 4 5 6 7

   Very Involved ▼

2. Mark the box that represents your overall level of satisfaction with your high school experience during the 9th & 10th grade.

   Very Dissatisfied ▼
   □ □ □ □ □ □ □
   1 2 3 4 5 6 7

   Neutral ▼

   Very Satisfied ▼

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3. Mark the box that best represents the quality of your relationships with people at your high school during 9th & 10th grade.

<table>
<thead>
<tr>
<th>Relationships with:</th>
<th>a. Other Students</th>
<th>b. Faculty Members</th>
<th>c. Administrative Personnel and Offices</th>
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</thead>
<tbody>
<tr>
<td>Friendly, Supportive, Sense of Belonging</td>
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Unfriendly, Unsupportive, Sense of Alienation

Unavailable, Unhelpful, Unsympathetic

Unhelpful, Inconsiderate, Rigid

4. What did you miss most about your regular high school?

5. What did you miss the least about your regular high school?
In this section of the survey, you will be asked to respond to questions as they relate to your experiences during your enrollment at the College Academy at Broward Community College.

6. Rate (in order of most influential) what influenced your decision to enroll in the college academy? (1 is the most influential and 7 is the least influential)
   - Parental pressure
   - The opportunity to earn college credit while in high school
   - Free college
   - Get out of regular high school
   - Friends
   - Teachers/Guidance Counselors
   - Wanted to be part of something different.

7. Mark the box that best represents your level of involvement in co-curricular activities (such as student government, clubs, sports, etc.) while enrolled at the College Academy.

   Not Involved ▼
   □ □ □ □ □ □ □
   1 2 3 4 5 6 7

8. Mark the box that represents your overall level of satisfaction with the College Academy.

   Very Dissatisfied ▼
   □ □ □ □ □ □ □
   1 2 3 4 5 6 7

9. Mark the box that best represents the quality of your relationships with people at the College Academy.

   Relationships with:
   a. Other Students
   Friendly, Supportive, Sense of Belonging  ▼
   □ □ □ □ □ □ □
   7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 □
   Unfriendly, Unsupportive, Sense of Alienation  ▲

   b. Faculty Members
   Available, Helpful, Sympathetic  ▼
   □ □ □ □ □ □ □
   7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 □
   Unavailable, Unhelpful, Unsympathetic  ▲

   c. Administrative Personnel and Offices
   Helpful, Considerate, Flexible  ▼
   □ □ □ □ □ □ □
   7 □ 6 □ 5 □ 4 □ 3 □ 2 □ 1 □
   Unhelpful, Inconsiderate, Rigid  ▲
10. What did you like most about the College Academy?

11. What did you like the least about the College Academy?

12. What changes would you recommend in the College Academy?

13. What was your major at Broward Community College?
Transfer Readiness

In this section of the survey, you will be asked to respond to questions as they relate to your transition from the College Academy at Broward Community College to a university, four year college, or another type of institution.

14. Did you transfer to a university, four year college or another type of baccalaureate degree awarding institution?
   Yes
   No

If so, which one (please name)?

If not, please skip to question #23.

15. What was your major at the university?

16. Do you feel that the College Academy prepared you to do well academically at the university?
   Yes
   No

If not, what might be done differently?

17. Did you face any challenges in transferring to a university?
   Yes
   No

If so, please describe the particular types of challenges
University Experiences

In this section of the survey, you will be asked to respond to questions as they relate to experiences at a university, four year college, or other type of institution.

18. Mark the box that best represents your level of involvement in co-curricular activities (such as student government, clubs, sports, etc.) while enrolled at the university.

Not Involved ▼ Very Involved ▼

1 2 3 4 5 6 7

19. Mark the box that represents your overall level of satisfaction with the university.

Very Dissatisfied ▼ Neutral ▼ Very Satisfied ▼

1 2 3 4 5 6 7

20. Mark the box that best represents the quality of your relationships with people at the university.

Relationships with:

a. Other Students  b. Faculty Members  c. Administrative Personnel and Offices

Friendly, Supportive, Sense of Belonging ▼ Available, Helpful, Sympathetic ▼ Helpful, Considerate, Flexible ▼

7 □ 7 □ 7 □
6 □ 6 □ 6 □
5 □ 5 □ 5 □
4 □ 4 □ 4 □
3 □ 3 □ 3 □
2 □ 2 □ 2 □
1 □ 1 □ 1 □

Unfriendly, Unsupportive, Sense of Alienation ▲ Unavailable, Unhelpful, Unsympathetic ▲ Unhelpful, Inconsiderate, Rigid ▲

21. What did you like most about the university?

22. What did you like the least about the university?
Outcomes

In this section of the survey, you will be asked to respond to questions about the overall experience and outcomes related to participating in the College Academy.

23. Please indicate the highest level of education:
   € Completed an associate’s degree (A.A., A.S., etc.)
   € Started a bachelor’s degree program (B.A., B.S., etc.)
   € Completed a bachelor’s degree
   € Started a master’s degree program (M.A., M.S., etc.)
   € Completed a master’s degree program
   € Started a doctoral degree program (Ph.D., J.D., M.D., etc.)
   € Completed a doctoral degree program

24. How do you feel about missing out on a “traditional high school experience”?

25. If you could start over again, would you go to the College Academy?
   € Definitely yes
   € Probably yes
   € Probably no
   € Definitely no

26. As you reflect on your experience with the College Academy, is there anything else you would like to add about your experiences that you think would be helpful?

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## Demographics

27. Write in your age: ______

28. Your gender
   - Male
   - Female

29. Date of initial enrollment in the College Academy
   - Fall, 2000
   - Fall, 2001
   - Fall, 2002
   - Fall, 2003
   - Fall, 2004
   - Fall, 2005

30. What is your racial or ethnic identification? (Mark only one)
   - American Indian or Native American
   - Asian American or Pacific Islander
   - Black or African American
   - White (non-Hispanic)
   - Hispanic or Latino
   - Multiracial
   - Other
   - I prefer not to respond
Thanks for sharing your views. Your participation in this study will help provide useful information for improving and expanding dual enrollment programs.

After completing the survey, please put it in the enclosed postage-paid envelope and deposit in any U.S. Postal Service mailbox.

If you have any questions or comments, contact Laura Heath at (954) 673-8593, tcaheath@yahoo.com, or Deborah L. Floyd, Ed.D at (561) 297-2671.
Appendix B

Cover Letter
Greetings former College Academy students:

As a former student of the College Academy, you were among the first students in Broward County to participate in an intensive dual enrollment program, as an alternative to traditional high school. I am pursuing a study of the impact of this type of dual enrollment program. I am particularly interested in studying factors influencing your decision to participate in the College Academy, your involvement in co-curricular activities, your satisfaction with the dual enrollment program, the quality of your relationships with other students, faculty, and staff, and any challenges you may have faced in transferring to a university.

If you are willing to participate in this study, you are asked to complete a survey. You will be asked about your experiences in transitioning from a traditional high school, to the College Academy, and then to the university. The survey may take approximately 30 minutes to complete and may be completed in either written or electronic form. Your candid responses will help provide useful information for improving and expanding dual enrollment programs.

Your participation in this study is voluntary. All of the results of this study will be kept confidential and the results and information in this study will not be released in any way that may reveal the identification of participants without the participant’s lawful agreement.

Please see the enclosed “Informed Consent Form” for specific details of the project, including the purpose of the study and other relevant information.

Please sign the Consent Form, complete the enclosed survey instrument, and send your responses back in the self-addressed stamped envelope as soon as possible. If you would like a summary of the findings or want additional information, please contact me at (954) 673-8593 or tcaheath@yahoo.com or Deborah L Floyd, Ed.D, who is supervising this research, at (561) 297-2671.

Both your time and effort are greatly appreciated. Thank you.

Sincerely,

Laura A. Heath
Appendix C

Consent Form
Consent Form

1) **Title of Research Study:** Community College and University Experiences of High School Dual Enrollment Students

2) **Investigators:** Laura Heath – Doctoral Candidate, Florida Atlantic University
Deborah L. Floyd, Ed.D – Professor, Florida Atlantic University

3) **Purpose:** The purpose of this study is to describe the social experiences of students who participated in an intensive dual enrollment program. The primary focus of this study is to describe the students’ relationships with other students and faculty members, levels of involvement in co-curricular activities, challenges faced as dual enrollment students, and satisfaction with the dual enrollment program.

4) **Procedures:** If you are willing to participate in this study, you are asked to complete a survey. You will be asked about your experiences in transitioning from a traditional high school, to the College Academy, and then to the university. The survey may take approximately 30 minutes to complete and may be completed in either written or electronic form.

5) **Risks:** Your participation in this study is voluntary. The risks involved in participating in this study are no more than one would experience in normal daily activities. You may, however, refuse to participate, refuse to answer any questions, or withdraw from the study at any time without penalty.

6) **Benefits:** Benefits to the participants are anticipated to be positive. By reflecting on past experiences and sharing them with the researchers, the participants may find satisfaction in knowing that they have contributed to a better understanding of dual enrollment students and programs. Further, participating in this study will help provide useful information for improving and expanding dual enrollment programs.

7) **Data Collection & Storage:** All of the results of this study will be kept confidential and secure and only the investigators of the study, as noted above, will see your data, unless required by law. Your identity will be concealed through the use of a pseudonym. Confidentiality will be maintained and will involve storing all data in a locked file cabinet for the duration of five years, after which they will be destroyed. The results and information in this study will not be released in any way that may reveal the identification of participants without the participant’s lawful agreement. Upon receipt of the data, only the investigators of the study will be authorized to have access. No audio, video, or recording devices will be used in this study.

8) **Contact Information:** For related problems or questions regarding your rights as a subject, the Office of Sponsored Research at Florida Atlantic University can be contacted at (561) 297-2310. For other questions about the study, you should call the principal investigators, Laura A. Heath at (954) 673-8593 or Deborah L. Floyd, Ed.D. at (561) 297-2671.

9) **Consent Statement:** I have read the preceding information describing this study. All my questions have been answered to my satisfaction. I am 18 years of age or older and freely consent to participate. I understand that participation is voluntary and I am free to withdraw from the study at any time. I have received a copy of this consent form.

Signature of Subject: ___________________________________________ Date: _________________

Signature of Investigator: _________________________________________ Date: _________________

Signature of Investigator: _________________________________________ Date: _________________
Appendix D

Tables
Table 1

*Matriculation of Traditional Community College Students and College Academy Students*

<table>
<thead>
<tr>
<th>Traditional Students</th>
<th>College Academy Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>9th grade</td>
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<tr>
<td>11th grade</td>
<td>High school</td>
</tr>
<tr>
<td>12th grade</td>
<td>High school</td>
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<td>1st year college</td>
<td>Community college</td>
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<td>Community college</td>
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<td>3rd year college</td>
<td>University</td>
</tr>
<tr>
<td>4th year college</td>
<td>University</td>
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Table 2

*Gender and Ethnicity Breakdown of Cohorts*

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<tr>
<th></th>
<th>College Academy Cohort A</th>
<th>Traditional Students Cohort B</th>
<th>College Academy Cohort C</th>
<th>Traditional Students Cohort D</th>
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<td></td>
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</tr>
<tr>
<td>Asian</td>
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<td>Other</td>
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<td>0</td>
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<tr>
<td><strong>Total Females</strong></td>
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<td>96</td>
<td>94</td>
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<tr>
<td><strong>Males</strong></td>
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<td></td>
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</tr>
<tr>
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<td>Other</td>
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<td><strong>Total Males</strong></td>
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<td>66</td>
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<td><strong>Total Cohort</strong></td>
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Table 3

**SPSS Output for T Test for Equality of Means for Cohort A compared to Cohort B**

*Independent Samples Test*

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<tr>
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<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
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<td></td>
<td></td>
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Table 4

**SPSS Output for T Test for Equality of Means for Cohort C compared to Cohort D**

*Independent Samples Test*

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<tr>
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<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
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</thead>
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<td>Sig.</td>
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</tr>
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108
Table 5

Summary Statistics for Academic Data for Cohort A and Cohort B

With Gender Breakdown

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<tr>
<th>Cohort</th>
<th>Gender</th>
<th>AAGPA</th>
<th>AATIME</th>
<th>SUSGPA</th>
<th>BSTIME</th>
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<tbody>
<tr>
<td>A</td>
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<td>0.44231</td>
<td>2.454812</td>
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<td></td>
<td>N</td>
<td></td>
<td>75</td>
<td>74</td>
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<tr>
<td>M</td>
<td>Mean</td>
<td>3.15917</td>
<td>23.76471</td>
<td>2.93234</td>
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<td></td>
<td>0.42666</td>
<td>9.384251</td>
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</tr>
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<td>34</td>
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<td>22.47222</td>
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<td></td>
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<td></td>
<td>N</td>
<td></td>
<td>111</td>
<td>108</td>
<td>87</td>
</tr>
<tr>
<td>B</td>
<td>F</td>
<td>Mean</td>
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<td>N</td>
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<td>64</td>
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<td>Mean</td>
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<td>32.2</td>
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<td>0.92363</td>
<td>11.03328</td>
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<td>N</td>
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<td>34</td>
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<td>Total</td>
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<td>98</td>
<td>38</td>
<td>34</td>
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### Table 6

**Associate’s Degree Completion Rates With Gender Breakdown**

<table>
<thead>
<tr>
<th></th>
<th>Number of Associate’s Degree Completers</th>
<th>Percentage of Total</th>
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<tr>
<td><strong>Cohort A</strong></td>
<td></td>
<td></td>
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<tr>
<td>Females</td>
<td>74</td>
<td>75</td>
</tr>
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<td>Males</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
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<td>111</td>
</tr>
<tr>
<td><strong>Cohort B</strong></td>
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<td></td>
</tr>
<tr>
<td>Females</td>
<td>28</td>
<td>64</td>
</tr>
<tr>
<td>Males</td>
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<td>34</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>98</td>
</tr>
<tr>
<td><strong>Cohort C</strong></td>
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</tr>
<tr>
<td>Females</td>
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<td>96</td>
</tr>
<tr>
<td>Males</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>162</td>
<td>164</td>
</tr>
<tr>
<td><strong>Cohort D</strong></td>
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<td></td>
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<tr>
<td>Females</td>
<td>44</td>
<td>94</td>
</tr>
<tr>
<td>Males</td>
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<td>160</td>
</tr>
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<td><strong>Grand Total</strong></td>
<td>369</td>
<td>533</td>
</tr>
</tbody>
</table>
Table 7

Bachelor’s Degree Completion Rates With Gender Breakdown

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Number of Bachelor’s Degree Completers</th>
<th>Percentage of Total</th>
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</thead>
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<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>52</td>
<td>46.85%</td>
</tr>
<tr>
<td></td>
<td>Females 39</td>
<td>52.00%</td>
</tr>
<tr>
<td></td>
<td>Males 13</td>
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<tr>
<td></td>
<td>Total 52</td>
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<tr>
<td>B</td>
<td>20</td>
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</tr>
<tr>
<td></td>
<td>Females 15</td>
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<td>C</td>
<td>45</td>
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<td></td>
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<td>Males 17</td>
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<td></td>
<td>Females 14</td>
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<td>Males 4</td>
<td>6.06%</td>
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Table 8

*Summary Statistics for Academic Data for Cohort C and Cohort D With Gender Breakdown*

<table>
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<th>Cohort</th>
<th>Gender</th>
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<th>SUSGPA</th>
<th>BSTIME</th>
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<td>D</td>
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Table 9

*Response Ratings for Survey Questions Regarding High School Experiences With Gender Breakdown*

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Table 11

*Response Ratings for Survey Questions Regarding University Experiences

*With Gender Breakdown*

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Table 12

*Gender and Ethnicity Breakdown of College Academy Students*

<table>
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<tr>
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<th>Total</th>
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</tr>
<tr>
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<table>
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<td>29</td>
<td>18%</td>
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Table 13

*Majors Pursued by College Academy Students at the Community College*

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