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A Comparison Between Two Categories of Dual-Enrolled Students on Self-Efficacy and Leadership Practices

Neoka Marple Apple

A COMPARISON BETWEEN TWO CATEGORIES OF DUAL-ENROLLED STUDENTS ON SELF-EFFICACY AND LEADERSHIP PRACTICES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in
Leadership and Education in
The Adrian Dominican School of Education of

Barry University

by

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* * * * *

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Area of Specialization: Higher Education Administration

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ABSTRACT

A COMPARISON BETWEEN TWO CATEGORIES OF DUAL-ENROLLED STUDENTS ON SELF-EFFICACY AND

LEADERSHIP PRACTICES

Neoka Marple Apple

Barry University, 2010

Dissertation Chairperson: Dr. Edward Bernstein

The purpose of this causal-comparative study was to determine if the category mode, homeschool or public school, made a difference in self-efficacy and leadership practices on dual-enrolled students in the southeastern part of the United States where academic learning is offered both in traditional and non-traditional formats. This study consisted of a non-random sample selection of the first 30 volunteer respondents selected for each of the two categories of dual-enrolled students from a population of approximately 225 dual-enrolled 11th and 12th grades high school students. Thus, the total non-random sample size was 60 participants.

The independent variable, category of dual-enrolled students, had two levels: homeschool or public school. The dependent variables, self-efficacy and leadership practices, were measured on the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1992) and on the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007), respectively. There were two null hypotheses. Ho₁: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Ho₂: There is no difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled

students between those who are homeschooled and those who are public school students in collegiate high school.

Third-party volunteers obtained signed parental permission forms which were housed on SurveyMonkeyTM for students so they could participate in the study, thus providing confidentiality and anonymity for participating students. Data analysis using the *t*-test at the alpha level of .05 was conducted utilizing the statistical data analysis capabilities of Microsoft Excel. Based on these analyses, no significant difference was determined. Therefore, the researcher failed to reject the first null hypothesis. The obtained *t*-value was -0.76, and the critical value for α =.05 with 58 df was 2.0017. In addition, the researcher failed to reject the second null hypothesis. The obtained *t*-value was 1.31, and the critical value for α =.05 with 58 df was 2.0017.

Implications focused on the need to further study this population of students, dualenrolled homeschooled and public school students in collegiate high school. Recommendations and limitations were addressed.

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DEDICATION

To my hubby, Dennis, whose unselfish love and support made my dream become a reality . . . I love you.

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CHAPTER I

THE PROBLEM

Introduction

Traditional Schooling

Today, in the traditional K-12 public school system, there are concerns that public school students are not acquiring college-ready skills (Cooper, 2005; Giuliano & Sullivan, 2007; Greene & Forster, 2003; Kiesling, 2004; Liakos, 2005; Lieberman, 2006; Lines, 2000; Lords, 2000; Ray, 2000). In 2001, 70% of students in public high schools graduated; however, only 32% of those students met the qualifications to attend a 4-year college. Studies of freshmen at 4-year colleges showed that 22% of college students at public institutions, 13% of college students at private institutions, and as high as 49% at all institutions take developmental/remedial courses (Greene & Forster). According to Lieberman, 53% of freshmen students require at least one developmental/remedial course, 44% are not ready for college-level math, 32% are not prepared for college-level English, and 25% do not have college-level reading skills.

Homeschooling

The concern regarding a lack of college-ready skills has created debate among educators about the best method for educating students (Holt, 1995; Katz, 2001; Romanosky, 2006; Waal & Theron, 2003). Public school educators argue that public education serves the student best because of the diverse social environment, while homeschooling parents insist that the student learns best in an environment that relates especially to the child (Bielick, Chandler, & Broughman, 2001; Clark, 2001; High School Coursework, 2006; Holt Associates, 1999; Karp, Bailey, Hughes, & Fermin, 2004; National Home Education Research Institute, 1997; Ray, 2000).

Homeschooling, an alternative to public education, whereby children learn primarily at home under the supervision of their parents, serves students in all 50 states with each state having its own governance (Bielick, Chandler, & Broughman, 2001; Cooper, 2007). Today, homeschooling is the fastest growing alternative to public school, increasing by a rate of 15% annually (Bielick, Chandler, & Broughman; National Home Education Research Institute, 1997) with a 36% increase since 2003 and a 74% increase since 1999 (Karp, Bailey, Hughes, & Fermin, 2004; National Center for Education Statistics, 2008). The National Home Education Research Institute reported over two million U.S. students in grades K-12 are currently homeschooled, with an estimated 2.5 million children homeschooled during 2007-2008 (Ray, 2008b) which equals approximately the combined number of children in the Los Angeles and Chicago public school systems (Hill, 2000; Princiotta, Bielick, & Chapman, 2004). In 1994, the National Center for Home Education Press reported that homeschooled student enrollment in colleges approximated that of public school student enrollment.

According to Liakos (2005), homeschooled students have demonstrated academic success in college. Further, research by Cooper (2005) claimed that homeschooled students surpass other students in college in terms of decreased need for remedial courses as demonstrated by their SAT and ACT scores. Ray and Eagleson's (2008) and Klicka's (2002) research support early studies of Barber (2001) (cited in Ray, 2004a) who found that homeschooled students scored above public school students by an average of 67 points on the verbal section of the SAT and by an average of 21 points on the math section of the SAT during the 1999-2000 school year.

Similarly, homeschooled students scored an average of 22.7 points above the national average of 21 on the ACT. With 80% of elementary and secondary homeschooled students scoring above

the national average on individual standardized tests, the growth of the homeschooling movement is warranted.

Regardless of whether a student is homeschooled or a public school student, college education exists to prepare the student for life and knowledge (Orr, 2002). However, Greene and Forster (2003) argue that low rates of college readiness, particularly in the public school student population, result from the inability of students to learn or the lack of motivation to become college-ready. Therefore, it is suggested that reform is needed to improve college-readiness. This reform, which serves as a response to concern about a lack of college-ready skills, consists of high school dual enrollment on a college campus.

Thus, we have a new population of students in college, the dual-enrolled homeschooled high school student and the dual-enrolled public school student in collegiate high school, resulting from the poor academic outcomes of traditional high school programs. While the academic performance of each of these two groups is assumed to be an improvement over the traditional high school program, this study will examine self-efficacy and leadership practices within these two student groups.

Statement of the Problem

Longitudinal studies by the U.S. Department of Education (Karp, Bailey, Hughes, & Fermin, 2004) found that the academic intensity of high school courses was a strong precollegiate factor in predicting college success. Green and Foster (2003) showed that by taking college-level courses in high school, success in college was enhanced. Therefore, states have begun to set statewide high school coursework requirements for college admission (High School Coursework, 2006). An effective way to implement a more rigorous curriculum is by offering college-level courses to high school students in a dual-enrollment program (Giuliano & Sullivan,

2007) for both homeschooled and public school students. Dual enrollment provides high school students with a variety of rigorous academic and technical courses (Karp, Bailey, Hughes, & Fermin). Therefore, the dual-enrollment high school experience maximizes the potential of college-level learning during the high school years because college-level courses challenge students by creating an atmosphere that promotes success in college (Giuliano & Sullivan).

Despite the increasing popularity of dual-enrollment programs, research on the two major categories of high school students who participate, homeschooled students and public school students, is still in its infancy (Adelman, 1999; Lines, 2000; Silver, Smith, & Greene, 2001). Furthermore, there is a lack of research comparing homeschooled and public high school students on self-efficacy and leadership practices (Leithwood, 2005). This apparent lack of research comparing dual-enrolled homeschooled and public high school collegiate students is the catalyst for this study, namely to determine if there is a difference between these two categories of students.

Purpose of the Study

This study compares self-efficacy and leadership practices of two categories of dual-enrolled students. The intent was to determine if the category, homeschool or public school, makes a difference in self-efficacy and leadership practices of dual-enrolled high school students in college courses.

Significance of the Study

This study presented an opportunity to advance knowledge about self-efficacy and leadership practices of two categories of high school students, homeschooled and public school students in collegiate high school. While numerous research studies offer data on the academic success of graduated homeschooled students compared to traditional students in college, there is

a paucity of research offering data on dual-enrolled high school homeschooled and public school students in the areas of self-efficacy and leadership practices.

With an annual growth rate of 15%, homeschooling is the fastest growing alternative to public school education and is projected to reach an enrollment nationwide of 3 million by 2010 (Beaton, 2005; Bielick, Chandler, & Broughman, 2001; Lines, 1996, 2000; Ray, 1999, 2003). In the 21st century, homeschooling is strong due to its academic success (Conlin, 2006; Lines; Wartes, 1990a, 1990b). Clark (2001) and Cooper (2005) posited that homeschooled students have demonstrated success in college by excelling academically compared to other students. According to Whitehead and Crow (1993) and Ray (2000), there are no studies that find homeschoolers academically inferior to traditionally schooled students. This successful academic engagement record translates to an increased participation in higher education. Homeschooled students attend college at approximately the same rate as public school students (Ray, 1990; Toch, 1991). Research conducted by Prue (1997) in a nationwide survey of college personnel with experience working with homeschooled students found that these students positively adjust in college not only in terms of academics, but also emotionally and socially.

Public school educators agree that college-readiness reform is needed due to low rates of college readiness being reported (Greene & Forster, 2003). This reform exists in the manner of dual enrollment during high school; hence, there is now a national trend to better prepare high school students for college by increasing learning through advanced and rigorous coursework. Students are challenged with college-level courses while still in high school, thus creating an academic atmosphere that promotes success in college and eliminates the potential need for remedial courses upon entry to college (Giuliano & Sullivan, 2007; Greene & Forster).

However, despite the increasing popularity of dual-enrollment programs now evident in 50 states, research on the two major groups of high school students who participate, homeschooled and public school students, is still in its infancy (Adelman, 1999; Lines, 2000). Many colleges and universities invite high school students to participate in dual-enrollment programs (Giuliano & Sullivanm, 2007; Karp, Bailey, Hughes, & Fermin, 2004; Smith & Farris, 2006). Furthermore, even though these student populations have increased in number (Leithwood, 2005), little research is available comparing self-efficacy and leadership practices of dual-enrolled homeschooled and public high school students. Therefore, peripheral research and older studies were included extensively in the literature review of this study due to the paucity of research in the areas of self-efficacy and leadership practices. New studies in this underdeveloped area of research offer a unique opportunity to compare self-efficacy and leadership practices of dual-enrolled homeschooled high school students and public school students in collegiate high school.

Effective leadership must have a component of self-efficacy even though research has not demonstrated how self-efficacy impacts leadership effectiveness (Bandura, 1997; Bass, 1990; House & Aditya, 1992; McCormick, 2001). Astin and Astin (2000) posited that, in the area of leadership, academia reflects the values and vision of society as it intertwines with the leadership offered by the college environment. Students are, therefore, attracted to their academic leaders, indicating that higher education plays a major part in shaping the quality of leadership, thus acting as a place for society's leaders. McIntire (1989) agreed with Astin and Astin and Locke (1991) in that leadership is fostered when students engage in activities such as student government and clubs. These extracurricular activities give students a chance to practice their leadership skills. In comparison to empirical leadership studies, which reflect the

effect of leadership on students by school-level leaders, Leithwood (2005) argues that there is a lack of research relating to student self-efficacy and the leadership practices of dual-enrolled students.

As noted, research is deficient in the area of self-efficacy and leadership practices of dual-enrolled homeschooled high school students and public school students in collegiate high school. Studies in this area are needed, particularly since students participating in dual-enrollment programs are a significantly growing population impacting higher education and, as such, can serve as an appropriate source of information (Ray, 2004b).

Theoretical Framework

The theoretical framework of this study is based on Bandura's (1989) Social Cognitive Theory (SCT) which supplies a framework for the meaning of self-efficacy. According to SCT, perceptions about one's own abilities and characteristics are developed and guide behavior (Bandura). Self-efficacy, then, builds on these self-reflective perceptions and is fundamental to initiating behavior necessary for performance and social integration (Tucker & McCarthy, 2001). Bandura (1997), Tucker and McCarthy, and Schwarzer (1992) further contended that self-efficacy is a major determinant of social maturity and self-regulation, hence motivation. An outward manifestation of social maturity is leadership behavior (McCormick, 2001; Pink, 2001). In short, engagement in college-level courses during high school reflects students' self-efficacy and demonstrates motivation and preparation for further college attendance (University of Arizona, 1999). Self-efficacy, then, lends itself to activities that foster leadership (Montgomery, 1989). Included in this framework, Kouzes and Posner's (2007) Model of Leadership addresses the construct of leadership which includes five practices common to "personal-best leadership experiences" (p. 13). The Five Practices of Exemplary Leadership are as follows: Model the

Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart.

Independent and Dependent Variables

The independent variable for this study, category of dual-enrolled students, had two levels, homeschooled students and public school students or public school. Homeschooled students may participate in dual enrollment once they complete the 9th grade and as long as they maintain high school homeschooled status while taking college courses. Public school students may begin college courses in the 11th grade while enrolled in a collegiate high school.

The dependent variables for this study were self-efficacy and leadership practices as measured on the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1992) and the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007), respectively.

Research Questions and Null Hypotheses

The research questions for this study were: a) Is there a difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school? b) Is there a difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school?

The null hypotheses for this study were:

Ho₁: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Ho₂: There is no difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school.

Definition of Terms

The following terms are identified and were used in this study:

Dual-enrolled students in this study were defined as either homeschooled high school students or those in a public collegiate high school. Homeschooled students are those who receive education at home under the direction of their parent(s) or guardian(s) and may take college courses while in high school once they complete the 9th grade at home. Public school students are those who take college courses beginning in 11th grade in a public collegiate high school located on the campus of a college. These students are commonly referred to as collegiate high school students or collegiate students.

Self-efficacy in this study is operationally defined as a score on the General Self Efficacy Inventory (Jerusalem & Schwarzer, 1992). The construct of self-efficacy includes self-regulation and self-reflective thought that affect behavior originating from perceptions about one's own abilities (Bandura, 1989).

Leadership practice in this study is operationally defined as a score on the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007). The construct of leadership

evolves from an orientated, fluid, multidirectional, and dynamic relationship that influences its changing environment (Bass, 1990; Chatman & Flynn, 2005).

Limitations and Assumptions

The proposed problem of this study was investigated by employing causal-comparative research methodology. Therefore, it was not possible to manipulate the independent variable, the category of dual-enrolled students. A limitation in this causal-comparative study was that it did not allow control for all threats to internal validity, such as differences in subject characteristics, attitude of participants, and maturation (Fraenkel & Wallen, 2006). Also, the participants consisted only of volunteers and, therefore, may not be representative of dual-enrolled students. Finally, since the study was conducted in only one county, results may not be generalizable to other populations.

There was an assumption that the participants in the study responded honestly and that both categories of students were equally motivated. Also, it was assumed that the two instruments were valid and reliable measurements for their intended use.

Setting

The site for this study was a county in the southeastern part of the United States where academic learning is offered in both traditional (public school) and non-traditional (homeschooling and collegiate high school) formats. The researcher selected this county for several reasons: (a) Dual-enrolled homeschooled high school students and public collegiate high school students in a school located on the campus of a community college were included in this county's educational system; and (b) The principal of the collegiate high school stated a desire to ascertain if self-efficacy and leadership practices were exhibited by each category of the dual-enrolled students (S. Metz, personal communication, July 17, 2009). In addition, the director of dual enrollment stated, "This information would be of interest as no data exist now on these two growing categories of students except for their

academic records" (L. Webster, personal communication, September, 2008).

Summary

This chapter discussed a new population of students that has arisen in response to the poor academic performance of traditional high school programs: dual-enrolled homeschooled high school students and public school students in collegiate high schools. In spite of the increasing popularity of dual-enrollment programs, research on these two categories of students is still in its infancy and lacks data comparing self-efficacy and leadership practices of these two categories of dual-enrolled students (Adelman, 1999; Leithwood, 2005; Lines, 2000). Therefore, the purpose of this study is to compare self-efficacy and leadership practices of two categories of dual-enrolled students, homeschooled high school students and public school students in collegiate high schools. The study was significant due to the lack of research on these two categories of students, both of which are impacting higher education. Further, research on these student populations serves as an appropriate source of information on their involvement at the college level (Ray, 2004b).

Bandura's (1989) Social Cognitive Theory, which supplies a framework for the meaning of self-efficacy, guided this study. As identified in the research, leadership practice is an outward manifestation of self-efficacy (McCormick, 2001; Pink, 2001; Tucker & McCarthy, 2001). The independent variable for this study is the category of dual-enrolled students which has two levels: homeschool and public school. The dependent variables for this study are self-efficacy and leadership practices as measured on the General Self-Efficacy Scale (Jerusalem & Schwarzer, 1992) and the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007), respectively. There are two research questions for this study: a) Is there a difference in self-efficacy between students who are homeschooled and those who are public school students in

collegiate high school? b) Is there a difference in leadership practices between students who are homeschooled and those who are public school students in collegiate high school?

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This review of the literature focused on relevant studies related to homeschooled and traditional public school students. However, it is important to note that there are few studies, if any, on the fast-growing population of dual-enrolled students, either homeschooled or public school collegiate students. Further, research on self-efficacy and leadership practices of these two groups of students is minimal. In view of the fact that both groups of students are growing significantly, studies will serve as an appropriate source of information on their involvement in college-level courses while in high school (Ray, 2004b). Because of the paucity of research in this area, peripheral research and older studies were included in this literature review. Thus, since research is deficient, new studies in this area offer researchers a unique opportunity to compare the dual-enrolled homeschooled students and public school students in collegiate high school on the measures of self-efficacy and leadership practices.

This literature review begins with a brief discussion of the history of education, including its purpose and benefits. Next, the challenges of college readiness are reviewed in the areas of traditional schooling and homeschooling. Then, a summary is given on dual enrollment including two categories of dual-enrolled students: homeschooled high school students and public school students in collegiate high school. The next section covers a comparison of homeschooled and traditional or public school students in college settings. Finally, the concepts of self-efficacy and leadership practices are defined and explored.

Education

The first American public school was established in 1643 in the Massachusetts Bay Colony. Education was compulsory in some American states starting in the mid 19th century. Since its inception in the United States, public education has evolved to a level in which it is mandated and provided for children by the government and paid for in whole or in part by taxes. The term *public education* is generally referred to as basic education, K-12 education, or primary and secondary education. Major components of the design of public education include compulsory student attendance, certification of teachers, and curricula, testing, and standards provided by the government (KCET, 2001).

Higher education is understood as obtaining additional education after high school graduation. Various types of higher educational learning include college, university, and professional schools such as law, theology, business, and medicine. Junior college and institutes of technology may also be considered higher education. Higher education programs require completion of high school (Higher Education, 2001). This literature review focuses on studies relevant to the specified population, homeschooled and public school students in the context of a college setting. College education is designed to not only provide a comprehensive academic education, but also to prepare students for life experiences. The purpose of education, then, is to provide both the technical and social skills and legitimacy to work in society (Lieberman, 1993). With the various higher education sectors available, students have the opportunity to attend college in the more traditional manner (i.e., on campus), online, or in blended formats. Degrees are offered at various levels so students may start with an associate degree and advance at their own pace to the doctoral level. With these many opportunities and approaches to obtaining a degree, the ever-rising cost of higher education brings into question the value of pursuing higher

education. Students make decisions regarding the cost of tuition, choosing college over full-time employment, and the enormous amount of debt versus the worth of investment. Day and Newburger (2002) posited that because college graduates, on average, earn more than high school graduates, this investment warrants the financial burden and personal sacrifices.

Early qualitative research supported the benefits of pursuing a degree in higher education beyond that of increased income. Cohn and Geske's (1992) pivotal studies demonstrate a high correlation between college education and cultural and family values and economic growth.

Early quantitative research studies by Gutherson (1992) also supported these findings in that college graduates displayed an optimistic view of their personal progress.

Additional research by the Institute for Higher Education Policy (1998) supported a relationship between a positive community and education. This relationship reflected personal benefits that flowed over into the community creating increased tax revenues, the ability to save money, greater workplace productivity, increased personal and professional mobility and options, improved quality of life for family and self, wise consumer decision making, increased consumption, increased workforce flexibility, more leisure time, and decreased reliance on government financial support. This relationship was what the Carnegie Foundation identified as the "non-monetary benefits of higher education," (2002, p. 5) in which the college graduate is characterized as cultured, rational, consistent, and less authoritarian than the non-college graduate (Rowley & Hurtado, 2002).

College Readiness

Traditional Schooling

The Eight-Year Study, published in 1942 by the Commission of the Progressive Education Association on School and College Relations, expressed that public schools failed to

create conditions necessary for effective learning in higher education (Aikin, 1942). The purpose of this landmark study was to obtain reliable evidence on the relationship between public school and college success. The study concluded that public school and college relations at the time were ineffective. The results from this study were used to establish a relationship between public schools and colleges that focused on reconstruction of the role of the secondary level (i.e., high school) in preparation for college and to ascertain how high schools could meet students' needs more effectively.

In another landmark study, A Nation at Risk (United States National Commission on Excellence in Education, 1983), an alarmed society argued that high school students needed more rigorous curricula. In this report, there is a claim that at one time our nation was unchallenged in its dominance of technology, science, industry, and commerce. The findings of this report, however, support a deterioration of our nation's prosperity, civility, and security. A Nation at Risk (United States National Commission on Excellence in Education) argues that while our nation's schools and colleges have contributed greatly to the foundation of our nation, their mediocrity has now eroded our nation's future. After an 18-month study, this report posits our nation's educational institutions have lost sight of the high expectations that this nation has always promoted. The report further argues that severe compromise on our nation's solutions to problems has created a gap in its resolve for answers to society's questions. With globalization, our nation has greater global competition which threatens the position of this country as the leading nation in the world. In order to stay abreast of this global competition, we must reform the educational system in a way that benefits all students. Individuals must possess a level of literacy that allows them to fully engage in society. A high

level of education is a ticket to a free and democratic society (United States National Commission on Excellence in Education).

A Nation at Risk boldly presents the many indicators of the poor state of our educational system. Examples of these indicators include consistent low scores by students on numerous academic tests, high illiteracy rates among minorities, low scores on achievement tests, and a decline in the number of students graduating from college. Analysts claim that these factors have produced a new generation of students greatly lacking readiness in science and technology when compared with the readiness of the previous generation. While it is true that the average citizen has more education than those of previous generations, the average graduate is not as educated as students 35 years ago. Both teachers and parents alike recognize that students are not emerging from high school ready for college. On a more positive note, however, this report surfaced a societal concern to address this issue. In A Nation at Risk, there is no patience for weak and redundant academics. There is, however, a general belief that education needs to be a top priority in our society.

Coexistent with these early studies, concerns continued that students in the public school system were not acquiring college-ready skills. For example, in 2001, 70% of students in public high schools graduated. This represents a mere 1-point increase in completion ratios as calculated by the Greene Method (Phelps, 2005). The Greene Method calculates the number of 12th grade graduates and divides it by the number of 8th grade graduates 4 years earlier in a particular school district. Graduation rates reflect how effective schools are. The calculation of the graduation rate for the class of 2000 reflected that only 32% of the students were determined qualified to attend 4-year colleges. Studies of freshmen at 4-year colleges found that 22% of college students at public institutions, 13% of college students at private

institutions, and as high as 49% of students at all institutions take remedial or developmental courses (Greene & Forster, 2003).

According to the Council on Post Secondary Education (Lieberman, 2006), 53% of freshmen students need at least one remedial or developmental course, 44% are not ready for college math, 32% are not prepared for college English, and 25% do not have college-level reading skills. However, some researchers argue that these low rates of college- readiness result from the inability of students to learn or their lack of motivation to achieve college readiness, not the ability of public schools to teach them these skills (Greene & Foster, 2003).

Nevertheless, educators indicate that the lack of college readiness, regardless of its origin, is a fundamental reason for students' failure in higher education. Following this frame of reference, students graduating from high school lacking college-ready skills find themselves in remedial or developmental classes upon entering college (Venezia, Kirst, & Antonio, 2003). Remediation costs students and states money in terms of tuition and in lost wages. Students who are required to take remedial or developmental courses are also more likely to leave college before receiving degrees than students not needing remedial coursework (Diel-Amen & Rosenbaum, 2002).

Methods for measuring college readiness were researched by the National Center for Education Statistics (NCES) (2008). The five criteria for this study were GPA, class rank, score on an NCES aptitude test, and SAT and ACT scores. Each student was evaluated based on his/her highest-scoring criterion. However, this index was determined not to be an accurate indicator of college readiness of students applying to college because the minimum standard for college readiness was set too low (Greene & Forster, 2003). Thus, research on high school academic outcomes as measured by test scores for admission to college found that indicators

such as SAT and ACT scores were not as accurate as high school GPA (Greene & Forster). In short, it is believed that the potential effect of secondary public schools on college readiness is very large. Reformation of the K-12 education system, then, is the key to improving college success (Greene & Forster).

Homeschooling: Historical Development

Homeschooling is an alternative form to traditional education in which children primarily learn at home under the supervision of their parents. Homeschooling is considered a return to the roots of society, whereby family, community, religious institutions, and work are all integrated into the daily lives and upbringing of children. Therefore, research indicates that homeschooling represents the historical way American society nurtured its children to become responsible and active citizens (Cooper, 2005). The philosophical stance in describing the roots of homeschooling as an alternative form of education can be traced to Rousseau (Doyle & Smith, 2007), the philosopher who argued that education must seek harmony between the needs of a child and that of social life, not just instill a social intellect. This form of alternative education can also be traced to Pestalozzi (Thomas, 2002), who took Rousseau's ideas and those of Neef (Gutek, 1978). Neef encouraged students to question and reason on their own and incorporated them into his boarding schools.

Educational philosophers such as John Locke and John Dewey argued that the home was the best place for children to learn (Lines, 2000). They denounced formal schooling, claiming that society was held together based on common ground, and that the school was an unnatural ingredient as it lacked a common productive activity (Lines). Dewey posited that the school was separated from society, therefore isolated from reality. He believed that children could be educated where there was a caring parent sufficiently intelligent to supply what the child needed.

While he did not advocate homeschooling, he did believe that this form of education would be conducted in a sloppy manner. However, it could be argued that Dewey might have considered homeschooling today in light of the current public school system (Lines).

Research by Moore and Moore (1994) in the early 1960s declared that homeschooling evolved in its reaction to the problems and inadequacies of public and private schools with their schooling prototypes. Raymond Moore (1990), with an Ed.D. from the University of Southern California and a former U.S. Department of Education employee, questioned whether young children institutionalized at an early age experienced a sound education. He questioned the timing of when children should enter school. Moore's research led him to hundreds of family developmental specialists such as Bronfenbrenner of Cornell University, John Bowlby of the World Health Organization, and Burton White of Harvard University. Bronfenbrenner argued that "subjecting children to the daily routine of elementary school can result in excessive dependence on peers" (Moore, p. 79). Moore, in his analysis of numerous studies, concluded that behavior and learning problems were often due to prematurely subjecting the young brain to activities such as reading and writing. Therefore, he argued for starting school as late as 12 years of age. From his research, he became interested in the homeschooled movement.

In the unsettled culture of the 1960s, John Holt, a popular education reformist later named as the grandfather of homeschooling, questioned issues of public schooling, claiming that traditional education was stifling youth. He believed that homeschooling represented the historical way our society nurtured its children to become responsible and active citizens (Holt, 1964; Holt Associates, 1999). His thoughts were influenced by the practices of the Montessori and Waldorf schools of the 1890s and 1900s (Holt). Holt posited that homeschooling, including mentorships and apprenticeships, serves to educate children as it did a majority of influential

leaders throughout history. Therefore, during the 1970s, John Holt became the biggest supporter of the homeschool movement (Holt Associates).

Holt further reflected this argument in his book, How Children Fail (1965), when he stated that children who are forced to learn are damaged in their initiative and creativity. Holt gave further examples of how the format of teaching mathematics did not promote critical thinking skills. He left the public school system and became a tenured professor at both Harvard and the University of California, Berkeley. His works demonstrated his frustration with the public school system and his opposition to compulsory school attendance and required testing. His strong beliefs gave support to those interested in what was soon to become a recognized homeschool movement. In 1981, Holt officially promoted the homeschool movement in his book, Teach Your Own: A Hopeful Path for Education. He boldly declared the right of parents to teach their children at home. He emphasized that homeschooling offers the child a benefit not given by other approaches to schooling. Holt agreed that public education is influenced too heavily by government and legislative interceptions. Holt (Holt Associates, 1999) was supported by Moore and Moore (1981), whose research, funded by the government and numerous universities, argued for delayed schooling. Conservative and religious groups joined the bandwagon created by Holt and Moore's support of homeschooling, viewing public schooling as a godless outrage (Stevens, 2001).

Holt (1995), in his final research, argued that public schools produce bland citizens only subservient to authority figures. Holt's theories about schools being a place for sorting children into economic winners and losers based on test scores rang true for many, thereby influencing an ever-widening range of families who embraced this style of learning for their children. This belief was supported by the earlier publication, *A Nation at Risk* (United States National

Commission on Excellence in Education, 1983), in which a concerned society claimed a needed improvement in its academia presentation to society's children.

Homeschooling remained mostly an underground phenomenon through the 1970s.

Reinforced by the works of Holt (1964) and Moore and Moore (1981), arguments supporting homeschooling began to be widely conveyed through books, magazines, and the media during the late 1970s and 1980s. For example, in the 20th century, a study by Cooper (2005), editor of *Homeschooling in Full View: A Reader*, found that even though society believed homeschooling to be a radical action, many homeschool advocates were encouraged by the fact that past prominent citizens were products of homeschooling, such as George Washington, John Quincy Adams, Abraham Lincoln, Theodore Roosevelt, Woodrow Wilson, Franklin Delano Roosevelt, William Penn, Patrick Henry, John Marshall, Thomas Edison, Robert E. Lee, Booker T. Washington, Mark Twain, Andrew Carnegie, Pearl Buck, and Margaret Mead (Knowles, Marlow, & Muchmore, 1991; Lyman, 1998). Preliminary documented studies based on a federal government survey found nearly 850,000 children homeschooled in the United States as of 1999 (Bielick, Chandler, & Broughman, 2001).

By the mid 20th century, high school was required, but some religious groups did not allow their children to attend. Nevertheless, professional teachers engaged the majority of society's children in formal education through the public school system. Parents who disagreed with the public school method of education chose private schools or remained at home, some underground, claiming their religious rights to educate their own children (Lines, 2000). During the late 1940s, homeschooling minimally surfaced in conversation and appeared in journals such as the *Atlantic Monthly*. According to Farrenga (2002),schooling has always been a controversial issue throughout the country's history. For example, Berle (1912), a Tufts University professor

and the author of *The School in Your Home*, argued that education in America had been a failure for over 21 years. He claimed that hundreds of letters from both parents and professors were stating the failure of the school system and wanted to know how to teach at home.

Homeschooling: Growth

One of the first official documents on homeschooling estimated 1,000,000 homeschoolers in 1994, up from 13,000 by the late 1970s and up from 15,000 in the early 1980s (Lines, 2000). This growth forced public schools to take notice (Aiex, 1994). Homeschooling had also become a media attraction with favorable stories on homeschoolers featured in the Baltimore Sun (Maushard, 1996); Chicago Tribune (Banas, 1989); New York Press (Strausbaugh, 1995); New York Times (Celis, 1992; Saulney, 2006; Sink, 1999); Newsweek (Hancock & French, 1994; Kantrowitz, 1998); The Christian Science Monitor (Cook, 1999); The Wall Street Journal (Brandly, 1997; Farris, 1997; Feinstein, 1986; Home Improvement, 2002; Stecklow, 1994); Time (Home Sweet Home, 1994); USA Today (Mattox, 1999); U.S. News & World Report (Hawkins, 1996); and Washington Post (Benning, 1997; Chandler, 2007; Childress, 1995; Cleaveland, 2001; Hong, 1994; Walsh, 1984). Today media features on National Public Radio (2001), CNN (King, 2004), The Times (Rhodes, 2000), The Washington Times (Billups, 2000a; College Feels Like Home, 2000b; Home Schooling Under Siege, Malkin, 2001), Time (Cloud & Cloud, 2001), USA Today (Evans, 2003; 2005), More Black Families, Chen (2005), and Women Today (Raycroft, 2000) present homeschooling as a positive alternative to traditional schooling (Medlin, 2000).

The practice of homeschooling was rekindled during the 1980s. The National Home Education Research Institute (1997) reported that more than 2 million U.S. students in grades K-12 were home-educated, representing 3% of all school-aged children. Lines (2000) approximated

between 3 million and 4 million children were involved in the homeschool movement while Ray (2008b) estimated 2.5 million children were homeschooled during 2007-2008 with a projection of 3 million children by 2010. However, the U.S. Department of Education's (Karp, Bailey, Hughes, & Fermin, 2004) estimate is 1.1 million. The Home School Legal Defense Association disagrees and puts the number closer to 2 million and perhaps as high as 2.1 million homeschoolers (Ray). This number does not include all homeschooled students as some do not register with their school districts or are registered under umbrella schools, which are considered to be private schools (Ray).

According to Rudner (1999), Director of the ERIC Clearinghouse on Assessment and Evaluation, home education is growing by a rate of 15% annually, making it the fastest growing alternative to public school education. It is legal in all 50 states with each state having its own governance (Beaton, 2005; Bielick, Chandler, & Broughman, 2001; Kiesling, 2004; Lines, 2000; National Home Education Research Institute, 1997; Ray, 2003; Romanosky, 2006; Rudner, 1999). There has been a 74% increase in homeschooling since 1999 with minorities making up 15% of the homeschooled students (Ray, 2008b). Only charter schools compete with this growth (Center for Education Reform, 2007). Homeschooling continues due to its educational options and facilitation by numerous support groups (Burke, 2009).

Homeschooling: Academics

In the 21st century, homeschooling is strong and accepted by earlier societal doubters as a legal and viable source of education. This continued societal acceptance has been influenced by supportive and flexible legislation (Lines, 2000). This support also has been easier to obtain due to homeschooling's academic success at the elementary and secondary levels (National Home Education Research Institute, 1997). Results of these studies consistently support findings that

homeschooled students perform as well as or better than traditionally schooled students on standardized achievement tests (Conlin, 2006; Delahooke, 1996; Lines, 2000; McAvoy, 1986; Ray, 1990, 1992, 1993, 2000; Wartes, 1990a, 1990b, 1991).

Dozens of researchers have conducted studies, ranging from a multi-year study in Washington State, three nationwide studies in the U.S., and a Canadian study (Ray, 1994, 1997, 2001c; Rudner, 1999; Wartes, 1991). For example, Greene (1985) compared the scores on standardized achievement tests of 193 homeschooled students in grades 1 through 8 with students in the same grades in public schools in Alaska. The homeschooled students outperformed the traditional students in all academic subtests. Rakestraw (1988) in Alabama (84 homeschooled students) obtained similar results, as did a study by Frost (1966) in Illinois (74 homeschooled students), and by Tipton (1990) in West Virginia (81 homeschooled students). Richman, Girten, and Syder (1990) in Pennsylvania (171 homeschooled students) also replicated this study to find similar results.

Likewise, in a pivotal study, Ray (1990), president of the National Home Education Research Institute, conducted the first national study of academic achievement using 1,417 homeschooled students in K-12 grades. The students scored at or above the 80th percentile on all sub-tests, which was above the national average. Wartes (1990b) summarized studies of 4 years and found comparable results (2,911 sets of tests scores). Still, in another study in 1991, the Stanford Achievement Test (8th Edition, Form J) was administered by the Home School Legal Defense Association (Ray, 1995), in cooperation with the Psychological Corporation, to 5,124 homeschooled students, all K-12, representing 50 states. The homeschooled students' range of composite scores on the basic battery of tests in reading, math, and language arts ranked within the 18th to 28th percentile. In this study, 692 homeschooled 4th graders averaged in the 77th

percentile in reading, the 63rd percentile in math, and the 70th percentile in language arts. The 6th grade homeschoolers scored in the 76th percentile in reading, the 65th percentile in math, and the 72nd percentile over-all. The results are above public school averages.

In a study by the National Center for Home Education (1994), test scores for 16,311 homeschoolers, K-12, from all 50 states, whose tests were scored through the Riverside Publishing Company, showed that, on average, homeschooled students placed at the 77th percentile on the Iowa Test of Basic Skills. In reading, the homeschoolers' nationwide grand mean was the 79th percentile, thus performing better in reading than 79% of the traditionally schooled students on whom the test is normed. The homeschooled students scored in the 73rd percentile in the areas of language arts and math. These scores show that 54.7% of the students in grades K-12, double the number of traditional school students, have scores in the top quarter of the student population nationwide.

Ray (1995) analyzed standardized test results for K-12 homeschooled students. Results were positive in that 80% of these students achieved individual scores above the national average of traditionally schooled students, with more than half with individual scores in the top quarter of the population. Rudner (1999), in the largest study ever conducted in the U.S., confirmed this data in his survey of 20,760 homeschooled students and families, and further stated that elementary homeschooled students tend to perform one or more grade levels higher than their peers in traditional schools, especially if the student was always homeschooled. The median scores for every subtest in every grade were in the 70th to 80th percentile range, which was above private and public schools.

The study *Strengths of Their Own: Home Schoolers Across America* was conducted in 1997 with a sample of 5,402 homeschooled students from 1,657 families. The study

demonstrated that homeschoolers, on average, out-performed their counterparts in public schools by 30 to 37 percentage points in all subjects. A significant finding when analyzing the data for 8th graders was evidence that homeschoolers who are homeschooled two or more years score substantially higher than students who have been homeschooled 1 year or less. The new homeschoolers were scoring on average in the 59th percentile compared to students homeschooled the last two or more years who scored between the 86th and 92nd percentiles. In numerous studies, homeschooled students scored, on average, in the 65th to 80th percentiles on standardized academic achievement tests both in the United States and Canada, as compared to the public school average at the 50th percentile. Furthermore, research supports the ability of homeschooled students to perform at the college level (National Center of Education Statistics, 2008; Ray, 2001a, 2001b; Van Pelt, 2003).

In 2004, the Canadian Centre for Home Education, along with the Home School Legal Defense Association, released *Home Education in Canada: A Report in the Pan-Canadian Study on Home Education 2003*. This was the first study in 10 years of Canada's 60,000 to 80,000 homeschoolers. Test results from 1,080 home-educated students participating in the standardized Canadian Achievement Test supported that over 94% of these students scored above the Canadian norm for basic skills and grade equivalency. Homeschooled students in grades 1 through 8 scored in the 81st percentile in reading, 76th percentile in language, and 74th percentile in mathematics. Norms for the non-homeschooled students were at the 50th percentile. Homeeducated students in grades 9 through 12 had mean percentile ranks of 85 in reading, 84 in language, and 67 in mathematics.

In summary, copious amounts of research support that homeschooled students perform well academically on standardized tests as compared to traditionally schooled students (Bielick,

Chandler, & Broughman, 2001; Clark, 2001; Conlin, 2006; Cooper, 2005; Delahooke, 1996; Frost, 1966; Greene, 1985; Kaplan-Leiserson, 2002; Lines, 2000; McAvoy, 1986; National Center for Education, Statistics, 2008; National Center for Home Education Press, 1994; Rakestraw, 1988; Ray, 1990, 1992, 1993, 2008a; Ray and Eagleson, 2008; Richman, Girten, & Syder, 1990; Tipton, 1990; Toch, 1991; Wartes, 1990a, 1990b, 1991). According to Whitehead and Crow (1993), there are no studies that find homeschoolers academically inferior to traditionally schooled students. On average, homeschooled students scored between the 65th and 80th percentiles on standardized achievement tests, and range 15 to 30 percentile points above the national norm of the 50th percentile (Ray, 2000, 2004b; Rudner, 1999). Critics of homeschooling argue that teachers have only a bachelor's degree in education and state certification; but, Ray (2004) valiantly argues that the majority of college instructors and lecturers have little if any formal training in actual teaching and that college teachers may be knowledgeable on a given topic but many have had no specific formal courses on how to teach college-level students. Hence, homeschooled parents are capable of instructing their own children as evidenced by standardized scores (Ray, 2004c).

Comparing Homeschooled and Traditional Students in College

Numerous studies demonstrate that the elementary- and secondary-level homeschooled students perform academically as well as or better than the traditional or public school students (Conlin, 2006; Delahooke, 1996; Lines, 2000; McAvoy, 1986; Ray, 1990, 1992, 1993; Wartes, 1990). Similar results also were noted at the college level (Klicka, 2004, 2006; Lazzara, 2008). Research supports positive results, which were replicated from surveys conducted by the National Center for Home Education Press (1994).

In a landmark study, Oliveira, Paulo, Watson, and Sutton (1994) addressed the cognitive performance of graduated homeschooled students in college on critical thinking skills. The results of the ANOVA and MANOVA tests showed that homeschooled students had higher critical thinking scores than did traditionally schooled students but there was no statistically significant difference between homeschooled students and traditionally educated students in deductive and inductive reasoning, thus supporting that homeschooling is a viable educational alternative.

At the Oral Roberts University, a study in 1994 found that while 212 homeschooled students made up only 10% of student enrollment, they averaged scores of 24 on the ACT and 1005 on the SAT, placing them higher than the national average. Also, the homeschooled students' average GPA was 3.02, with the college students having an average GPA of 2.76 (Klicka, 2002).

In another landmark 4-year research study, Galloway and Sutton (1995) addressed college academic preparedness of students enrolled in a liberal arts college. The study tracked 180 students, 60 graduates each from public, Christian, and homeschooling areas. The five success indicators used in the study were academic, cognitive, spiritual, affective-social, and psychomotor measures. Results supported that the graduated homeschooled students excelled above the other students in every category except psychomotor. Out of 63 indicators, homeschooled students ranked first in 42 of these categories. These positive results were replicated in surveys conducted by the National Home Education Research Institute (Ray, 2004b).

Also, in Galloway and Sutton's (1995) research, the graduated homeschooled high school students scored significantly higher on the ACT English sub-test than did traditionally schooled

students, both in the public and private arenas. The two MANOVAs, however, showed no significant differences among the students on composition and usage skills. Hence, the graduated homeschooled high school students showed college preparedness for higher level academic achievement similar to that of traditional high school students.

Other research supports that homeschooled students tend to score above the national average on their college entrance exams. The 1998 ACT High School Profile Report found that 2,610 graduating homeschoolers who reported their scores had an average of 22.8 on the ACT. This is higher than the national average of non-homeschooled students, which was 21.0. In 1999, 2,219 homeschooled students reporting their status on the SAT scored an average of 1083 (verbal 548, math 535), 67 points above the national average of 1016. In 2004, 7,858 homeschooled students taking the ACT scored an average of 22.8, compared to the national average of 20.9 (Home, 2006). Similar results in preparedness for college were obtained in research conducted by Jones and Gloeckner (2004), who conducted a study on 55 1st-year, degree-seeking, homeschooled graduates who enrolled in college or universities between 1998 and 2000 in Colorado. Criteria used in the study were GPA, credit hours earned, SAT and ACT scores, gender, and race/ethnicity. Nine null hypotheses were tested to ascertain differences between homeschooled and traditionally schooled students on these criteria. A random sample of traditional students meeting the same criteria as the homeschooled graduates was matched. Jones and Gloeckner concluded that analyses of academic performance suggested that homeschooled students are prepared for college and performed on college assessment tests as well as or better than traditional high school students.

Noble and Sawyer (2002) posited that ACT scores and SAT scores are the best known predictors of success at the university or college level. SAT and ACT scores supported that

homeschooled students, on average, score higher than students from public schools. For the 1999-2000 school year, homeschooled students' verbal scores averaged 568 and math scores averaged 532 while traditionally schooled students' verbal scores averaged 501 and their math scores averaged 510. Likewise, Jones and Gloeckner (2004) cited three studies (Gray, 1998; Jenkins, 1998; Mexcur, 1993) supporting that homeschooled students performed at the college level as well as or better than traditionally schooled students on GPA, SAT, and ACT scores. Mason (2004) found that homeschoolers entering college had above average SAT and ACT scores (1210 and 29 respectively) with an average GPA of 3.47 compared to traditional students with a GPA of 2.91.

In other studies, Clark (2001) and Cooper (2005) defended that homeschooled students had demonstrated success in college by excelling over other students. Furthermore, homeschooled students engage in college approximately at the same rate as public school students but continue the full 4 years. This replicated Ray's (1990) research on homeschooled adults in a nationwide survey, in which almost 51% reported attendance at a community or 4-year college. This also supported Toch's (1991) earlier study, reported in *U.S. News & World Report* (Homeschoolers at College, 1994), that claimed at least 50% of students who were homeschooled attend college. These data agreed with Ray's (1997) nationwide study that found homeschooled graduates pursue post-secondary education at similar rates to the traditional students.

A nationwide survey of college personnel experienced with homeschooled students conducted by Prue (1997) also found that homeschooled students positively adjust in college academically, emotionally, and socially. Early studies (Shea, 1996) reported a "boom" (p. A31) in homeschooled students accepted at "selective colleges" (p. A31), such as Stanford (Home

School Legal Defense Association, 2000), Harvard, and Yale (Golden, 2000), based on recommendation letters and SAT scores, even without high school diplomas. Sixty-two percent of college counselors argue that homeschooled students have an influence on higher education (Morgan, 2003). Boston University views homeschoolers as acquiring a desire for knowledge while displaying an independence and self-reliance that enhances the student's ability to address challenging courses (Ray, 2004b).

Sutton (2002) argues that homeschooled students are self-ruling while addressing challenges with a total passion and not faltering in their goals. The importance of higher education to homeschooled students is demonstrated in a Home School Legal Defense Association study (Shea, 1996) in which 69% of 1,657 homeschooled families responding attended postsecondary education programs. With the positive acceptance of homeschooled students, Cohen (2000), author of *The Homeschoolers' College Admissions Handbook*, calculates that 75% of colleges and universities have admission policies for homeschooled students.

Research supported that homeschooled students are ready for college when 55 college admission officers representing academic institutions of the Hawaii Association for College Admission Counseling, the Pacific Northwest Association for College Admission Counseling, Rocky Mountain Association for College Admission Counseling, and the Western Association for College Admission Counseling engaged in the utilization of the Jenkins'(1998) survey instrument to gather homeschool admission policies of the colleges and universities within this system. Three Carnegie universities were included. Data were analyzed using descriptive statistics regarding the admission officer's perceptions and opinions toward homeschooled graduates' projected success in college. Differences in the social coping of homeschooled

students compared to traditional students were tested by a one-way ANOVA while differences between private and public schools in their perceptions of the 1st-year success and social rating of homeschooled students compared to traditional students were measured using a *t*-test. Results showed that 56% of the admission officers expected homeschooled graduates to have an overall success greater than the traditional student with 45.4% agreeing that homeschooled graduates have the same retention rate as traditionally schooled students. A one-way ANOVA test showed no significant difference between the campuses of the colleges and universities participating in the study. However, a one-way ANOVA test showed a statistically significant difference on the admission officers' beliefs about how homeschooled students would cope socially as compared to traditional students (Jones & Gloeckner, 2004).

Dual Enrollment

Whether referring to public school or homeschooled students, college education exists to prepare students for life experiences and provide them with knowledge. However, some argue that low rates of college readiness, especially among public school students, result from the students' inability to learn or their lack of motivation to achieve college readiness. Therefore, it is suggested that a reformation is needed to improve college readiness (Greene & Forster, 2003). This reformation, which serves as a response to the lack of college-ready skills, is in the form of dual enrollment at the high school level; hence, there is now a national trend to better prepare high school students for college by increasing learning opportunities through advanced and rigorous coursework.

Longitudinal studies by the U.S. Department of Education (Karp, Bailey, Hughes, & Fermin, 2004) found that the academic intensity of high school courses is a strong pre-collegiate factor in predicting college success. To operationalize this, as early as 1998, Florida amended the

state constitution to redefine education and to include educational choices. Principles established a new governance structure to include a coordinated, seamless system from kindergarten through graduate school, thus better addressing the gap between high school and college (Giuliano & Sullivan, 2007; Robinson, 1997). The purpose is to maximize access to education and academic success, with flexibility and rigor suggested for the foundation of a blended program. Students are challenged with college-level courses while in high school, thus creating an atmosphere that promotes success in college and eliminates the need for remedial or developmental courses when entering college after high school graduation (Greene & Forster, 2003).

The New York State Board of Education also argued the need to lessen the amount of learning lost in the transition between high school and college by enhancing learning during the last years of high school, thereby maximizing the potential of college-level learning during the high school years. As a result, states have begun to set statewide high school coursework requirements for college admission. More high school students have taken advanced and rigorous coursework with this new approach dominating the educational format of students' learning experiences. This is exemplified by the 2004 National Education Summit on High Schools (Karp, Bailey, Hughes, & Fermin, 2004).

Green and Foster (2003) showed that by taking college-level courses in high school, success in college was enhanced. Giuliano and Sullivan (2007) also posited that an effective way to achieve success in college was by offering college-level courses in a dual-enrollment program. Dual enrollment, therefore, is the most popular method in the attempt to increase college-level learning in high school. While traditional participation in education at the college level is largely represented by high school graduates, focus on dual enrollment of high school students at the college level has existed over the last two decades and only recently has impacted the

educational system. This approach dominates the educational format of students' learning experiences through rigorous academics, thereby fostering a smooth transition from high school to college. As a result, dual enrollment enables high school students to take college courses for both high school and college credit. Many colleges and universities invite high school students to participate in a dual-enrollment program conducted either at the high school or on the college campus (Giuliano & Sullivan; Karp, Bailey, Hughes, & Fermin, 2004; Smith & Farris, 2006).

Dual enrollment, also known as dual-credit, concurrent enrollment, or joint enrollment (State Dual Enrollment, 2004; Waits, Setzer, & Lewis, 2005), is now evident in 50 states and the District of Columbia (Education Commission of the States, 2005), with 38 states having dual-enrollment policies (Karp, Bailey, Hughes, & Fermin, 2004; Smith & Farris, 2006). Of those 38 states with policies, 18 mandate that dual enrollment be available to students through local colleges. The colleges, likewise, must accept dual-enrolled high school students. In eight states, policy dictates that dual enrollment may be an option, but colleges and high schools are not required to provide this format of education. Student participation depends on available resources. In 10 other states, dual enrollment is not addressed but assumed to be optional (Karp, Bailey, Hughes, & Fermin). According to the Education Commission of the States, dual-enrollment programs vary and are run by states, districts, or institutions; however, the school district usually pays for the coursework (Orr, 2002).

This variability may reflect student eligibility, program goals, admission criteria, and GPA, and programs may have an open door policy, allowing each high school to determine who may be eligible (Boswell, 2001). Programs also vary in implementation and typologies, such as location of program (high school or college campus); instructor qualifications (college faculty or certified high school teacher); and credits earned (college credit upon completion of course

versus taking tests to demonstrate level of learning such as an escrow account) (Orr, 2002).

Research shows that 80% of college courses are taught on the college
campus with 94% of the colleges awarding college credits upon completion of the course (Waits,
Setzer, & Lewis, 2004).

The most common forms of dual enrollment are:

- Advanced Placement: approved course with assigned teacher and a selective admission process; validation of college-level course determined by examination
- Credit validation: college validates teacher and course taught in high school as college course so student receives college credit
- Contemporaneous attendance: high school student takes courses on college campus for college credit and receives both high school and college credit; most popular form of dual enrollment, especially popular with community colleges
- Early enrollment: college course offered to high school students after recruiting to a
 college; students do not finish their junior or senior years of high school as they opt
 out for college
- International baccalaureate: 2-year curriculum for secondary schools in which students typically gain up to 1 year of credit for college status; modeled on the rigorous European academic secondary schools and designed to assure entry to universities upon successful completion of examination
- *College jump start*: based on the belief that the average high school student is capable of engaging in more rigorous academic work than what is normally presented; goal is to obtain approximately 30 credits toward college degree; the focus also is to promote high school graduation (Plucker, Chien, & Zaman, 2006).

The dual-enrollment opportunity provides a realistic experience involving skills that are needed to flourish in college. This experience engages the faculty in preparing students, thus creating a healthy transition from high school to college (Noel, Levitz, & Saluri, 1985; Orr, 2002). Also, the coursework reflects relevance for future success since dual enrollment immerses students in the reality of college-level work giving them an understanding of the demands of rigorous coursework (Martinez & Bray, 2002). Lords (2000) even argued that motivation for under-achievers is improved through dual-enrollment programs because they have a higher level of expectation. Research supports that the strongest predictor of successfully completing a bachelor's degree is the intensity of the high school curriculum (Adelman, 1999). According to the NCES (2001), over half of 12th graders said that they intended to earn a bachelor's degree, yet only 28% of high school graduates hold a bachelor's degree, with 58% of high school graduates aged 25 to 29 completing only some college. Statewide high school coursework requirements for college admission were implemented with the purpose of maximizing access to education and academic success with flexibility and rigor resulting from the foundation of a blended program.

Studies, therefore, demonstrate that time and money toward a college degree can be saved since there is an increased opportunity for admission to and completion of college as the student moves seamlessly between high school and post secondary education systems in an enriched high school experience which, in turn, leads to a richer undergraduate degree experience (Clark, 2001; Christie, 2006; Karp, Bailey, Hughes, & Fermin, 2004; Robinson, 1997). It is also suggested that high school students' acquisition of college skills in a known environment (i.e., in high school rather than waiting until college) increases the students' comfort level which can make a difference between success and failure (Lieberman, 2006).

Postsecondary success is, therefore, predicated on both rigorous academic preparation and an understanding of college expectations (Venezia, Kirst, & Antonio, 2003).

Thus, enriching the high school experience for students leads to efficiency in obtaining college credits and enhances admission to and retention in college. With this seamless transition between K–12 and higher education, dual enrollment is thought to promote greater support for students' college aspirations and greater collaboration between high schools and colleges (Bailey & Karp, 2003; Center for Education Reform, 2007; Christie, 2006; Clark, 2001; Karp, Bailey, Hughes, & Fermin, 2004; Robinson, 1997). Proponents also claim that because this approach costs taxpayers and students less money, offers an enriched high school experience for all students, and provides early entry into advanced courses, one of the most popular methods in the attempt to increase learning is promotion of college-level learning in dual-enrollment high school programs (Giuliano & Sullivan, 2007).

For this study, dual enrollment entails courses in a contemporaneous attendance format. Therefore, the dual-enrollment program requires the high school and college to collaborate and share in the academic responsibility for each student. The dual-enrollment program simultaneously meets students' needs for academic rigor and promotes seamless coordination between secondary and postsecondary education programs.

In the state of the county where this study took place, state law allows homeschooled, public, and private school students to engage in college courses in a non-traditional approach to education as dual-enrolled students. The state's law explains that the dual-enrollment program allows enrollment of eligible secondary school students or homeschooled students in higher education courses that are creditable towards a career, technical certificate, or an associate or baccalaureate degree.

Collegiate High School Students

Dual enrollment has been available to public, private, and homeschooled students in the county of this study. Dual-enrolled public school students are known as collegiate high school students and they enroll (take pre-college courses that provide a foundation for college courses) in the 10th grade or in the 11th grade with a minimum GPA of 2.5. Students then begin college credit at the 11th grade level. Once in the program, a minimum GPA of 3.0 is required. Students in this program must pass all appropriate sections of the College Placement Test (CPT). No remedial or developmental courses are taken by collegiate high school students during the 11th or 12th grades. Further, public school students meeting the aforementioned criteria leave their assigned high school to attend the collegiate public high school, doing so by lottery. The purpose of collegiate high school, located on college campus property, is to provide qualified public high school students the opportunity to obtain an associate in arts (AA) degree while at the same time completing high school. Students are required to attend 25 instructional hours of coursework per week, which meets both the requirements for the AA degree and the 24 high school credits required by the state in which this study was conducted. There is a mandatory attendance of 180 school days with no cost for course fees or textbooks. These expenses are subsidized through state funds.

Homeschooled Students

Homeschooled students may dual-enroll once they complete the 9th grade with a 3.0 average in the homeschool setting and they must maintain this GPA throughout the program.

Dual enrollment allows homeschooled students the opportunity to obtain an AA degree while completing high school in a homeschool setting. Homeschooled students must show proof of enrollment in a homeschool program pursuant to state law. Homeschooled students must pass all

appropriate sections of the CPT. No remedial or developmental courses are taken by homeschooled dual-enrolled students. Expenses are subsidized through state funds except for the instructional materials which may or may not be free of charge. Eligibility criteria for homeschooled students may not exceed those required of other dual-enrolled students in this state.

This newer population of students, dual-enrolled homeschooled and public school collegiate students, continues to impact the academic scene with increased numbers over the years. However, with the increasing popularity of dual-enrollment programs, research on these two major groups of students is still in its infancy (Leithwood, 2005; Lines, 2000; Silver, Smith, & Greene, 2001; Adelman, 1999).

Self -Efficacy

Bandura (1997) identified *self-efficacy* as the concept of accomplishing what is preferred at a pre-determined level of agreement. This wish is grounded in a person's beliefs about his or her ability to successfully complete a desired outcome. While self-concept, by contrast, is a broader term referring to one's sense of self, self-efficacy concerns the determination of one's capabilities based on a given criteria. Self-efficacy focuses on an assessment of personal abilities in regard to established goals instead of comparing one's personal abilities to those of others.

Also, self-efficacy is a type of self-reflective thought that affects one's behavior as it reflects past experiences of mastery (Bandura, 1977, 1989). Self-efficacy offers flexibility to adversity and prevents vulnerability to stress and depression. This cultivates a sense of positive well being which can be used as identifiers to predict levels of accomplishment (Latha, 2007).

Familial influence offers the initial development of self-efficacy. Therefore, children's self-efficacy is affected by home influences that eventually help children to interact positively

and effectively within their environments (Bandura, 1997; Meece, 1997). Furthermore, these home influences of self-efficacy are bidirectional. An environment that allows for mastery experiences enhances the development of the child's self-efficacy. Hence, children who are curious and explorative prompt parental responsiveness. This curiosity, along with any challenges, motivates children to learn new information and skills. As a result, parental investment impacts children's cognitive development (Meece).

Meece (1997) argued that parents, who provide learning environments encourage exploration, afford tools for managing difficulties, arouse curiosity, enhance their children's intellectual development, and provide a foundation for the child's self-efficacy. As the parent models persistence, the child's self-efficacy strengthens (Bandura, 1997).

Peers also become important during the child's development, thus amplifying the child's self-efficacy. Modeling, motivation, performance of tasks, and peer networking are examples of influences that provide opportunities for interactions promoting socialization (Cairns, Cairns, & Neckerman, 1989; Dweck & Goetz, 1978; Kindermann, McCollam, & Gibson, 1996; Schunk & Zimmerman, 1987).

Bandura (1977; 1989) asserted that self-efficacy is a major determinant of self regulation or motivation. If a person feels that he or she is capable of achieving a goal which can lead to academic achievement, then the person is likely to work harder and to give up less easily compared to someone who has low self-efficacy. Thus, a student's self-efficacy reflects engaging in college-level courses at the high school level, demonstrating motivation and preparation for further college attendance (University of Arizona, 1999).

McCormick (2001) argued that high self-efficacy guides motivation and the identification of goals. Goals and self-efficacy affect performance via motivation. The concept of self-efficacy

suggests that a strong sense of self-efficacy is related to high achievement and social integration (Bandura, 1997; Schwarzer, 1992; Tucker & McCarthy, 2001). In turn, this achievement encourages the person's self-confidence, a term used interchangeably in the research on self-efficacy (Bandura; Bass, 1999; Schwarzer; Tucker & McCarthy).

It can be inferred that self-confidence or self-efficacy impacts leadership since an outward manifestation of socialization extends to self-efficacy in leadership (McCormick, 2001; Pink, 2001). McCormick also argues that most leadership literature claims self-confidence as necessary for effective leadership (Northouse, 2007; Yukl & Van Fleet, 1992). Furthermore, the early research of Bennis' (1985) still reflects today's thinking in the discussion of why leader self-confidence is important and how it affects leadership behavior. In determining the effect of self-confidence or self-efficacy on leadership, Pink (2001) argued that when a child is socialized, there are the developmental beginnings of self-efficacy and leadership characteristics. Hence, this aspect of societal engagement or socialization extends to the leadership arena.

Research

Research studies support that homeschooled students are better socialized than the traditionally schooled students (Kaplan-Leiserson, 2002; Pink, 2001; Ray, 1999). Taylor (1986) conducted an empirical study addressing socialization and self-concept of 220 homeschoolers in grades 4 through 12. The Piers-Harris Children's Self-Concept Scale (PHSCS) and demographics were utilized. Two-hundred and twenty-four subjects were randomly sampled. Results showed that homeschooled children scored significantly higher (p < .001) than did public school children both on the global scale (above the 91st percentile) and on 6 subscales of the PHSCS.

Kitchen (1991) found homeschooled students scored higher than traditionally schooled students on the Self-Esteem Index (Pro-Ed, 1991) while Shyers (1992) challenged the argument that homeschooled children were disadvantaged socially in their development. In Shyers' study, 70 homeschooled and 70 traditionally schooled children were videotaped while at play. The children were matched in age, gender, race, family size, number of extra-curricular activities, and socioeconomic status. The children's behavior was observed by counselors using the 97-item Direct Observation Form of the Child Behavior Checklist (Achenbach & Edelbrock, 1983). These counselors did not know which children were homeschooled and which children attended public school. No difference between the two groups was determined in self-concept and assertiveness as measured by social development tests. However, the traditionally schooled children's mean problem behavior (aggressive, loud, and competitive) was more than 8 times higher than that of homeschooled children.

In another study, Smedley (1992), using the Vineland Adaptive Behavior Scales (Sparrow, Bella, & Cicchetti, 1984), found that homeschooled students scored higher on socialization and social maturity subscales of the test (84th percentile) as compared to traditionally schooled students (23rd percentile). Smedley argued that homeschooled students are "more mature and better socialized than those who are sent to school" (p. 12).

In a similar study, Stough (1994) posited that homeschooled children scored higher than traditionally schooled students on community and family subscales of the Adaptive Behavior Inventory for Children (Mercer & Lewis, 1977). Stough argues that the "socialization of children in home schools is effective without exposure to large groups of children . . . [that] parents [impart] positive family socialization, which is not inferior to the public school culture" (p. 1).

J. Gary Knowles (1993), University of Michigan Assistant Professor of Education, reviewed a study conducted at the University of Michigan that supported homeschooled students as not being social oddities. Of the 53 adults surveyed, data found two-thirds were married, and none were unemployed or drawing welfare. Three-fourths claimed homeschooling supported them in interacting with all levels of society. More than 40% attended college, with 15% completing a graduate degree. Nearly two-thirds were self-employed, which Knowles argues reflects independence and self-reliance.

Chatham-Carpenter (1994) found homeschooled students with a sophisticated social network. Numerous studies support that homeschooled students participate in more activities than traditional students (Delahooke, 1986; Montgomery, 1989); watch less television than traditional students (Rudner, 1999); receive purposive direction from the parent to foster leadership skills (Montgomery); and actively engage in community functions (Gray, 1998). Also, Ray (2004b) declared that the research base was not as large on social engagement as it was on academic achievement for homeschooled students, but argued that homeschooled students have broader socialization beyond the traditional classroom, thus allowing for more interactions in their environment.

Today, in many public schools, homeschoolers integrate into public school activities (i.e., dual enrollment) without difficulty (Gutherson, 1992; Hahn & Hasson, 1996; Parker, 1992; Waal & Theron, 2003). Still, critics of homeschooling argue that society is affected negatively by homeschooling as it engages in too much self-sufficiency and personal independence. Therefore, society's problems are not addressed in the common arenas, thus causing social stratification (Apple, 2000; Lubienski, 2000). Nevertheless, most studies support that homeschooled students are not disadvantaged in relation to societal engagement. In fact, research states that their

development is at the same level or better than their peers in traditional education (Chatham, 1991; Parker, 1992; Whitehead & Crow, 1993). Kunzman (2005), Medlin (2000), Ray (2004b), and Reich (2002) agreed that socialization is not confined just to the classroom as homeschoolers do function productively in society. Thomas (1995) boldly argued that "there is no research which demonstrates that school is necessary for social development, there is only opinion" (p. 6). Moore (1982) states that research dictates that homeschooling creates students who are "socially advantaged . . . [with] good social adjustment . . . [and] are less peer-dependent than traditionally schooled children" (pp. 355-357).

Leadership

Investigating leadership introduces the researcher to a colossal amount of information with no single definition (Balderston, 1995; Bass, 1990; Bennis, 2007; Brown & Posner, 2001; Cranton, 2006; Gardner, 2004; Glassick, Huber, Maeroff, & Boyer, 1997; Hickman, 1998; Kotter, 1996; Kuh, Kinzie, Schuh, & Whitt, 2005; Maxwell, 2002; Northouse, 2007; Peterson, Dill, & Mets, 1997; Schuster & Finkelstein, 2006; Sternberg, 2007; Vroom & Jago, 2007). Yukl (1979) found the concept of leadership confusing because there are many other terms that are used interchangeably with it such as power, authority, and supervision. Yukl further stated that the precise definition of leadership cannot be determined without the objective and purpose of the researcher. Stodgill (1994) agreed that there are as many definitions of leadership as there are people who define this concept. Northouse argued that over the past 10 years, the public has been captivated with leadership, according to one's purpose, while freely exclaiming a variety of definitions.

Rost (1991) defined leadership as a multidirectional swayed relationship while Bennis (1997) explained leadership not as a swayed relationship but as the "influencing, guiding in a

direction, a course, action . . . opinion" (p. 9). DeBruyn (1997) described leadership as an entity that requires a close observation of engaged action that demonstrates the leader is meeting the goals and mission of the institution. Furthermore, leadership inspires others to want what you are performing in order to accomplish the work expected for the organization. Thus, leadership creates a desire to exemplify the person's leadership ability and style.

Closely related is Northouse's (2007) statement that leadership is the "process whereby an individual influences a group of individuals to achieve a common goal" (p. 3). Northouse depicted leadership as intellectually simple, yet behaviorally complex, grounded in amassed wisdom that has been molded by experience, information, and a set of essential values. This leadership style is action-orientated, with the self-regulated leader involved in an ever-changing environment (Bass, 1990; Yukl & Van Fleet, 1992).

A more traditional definition of leadership is interpersonal influence guided towards the accomplishment of a goal or set of goals (Allen, Stelzner, & Wielkiewicz, 1998). McCormick (2001) agreed and further defined leadership as a complex behavioral task that involves organization and the motivation of others. Leadership is also viewed as a dynamic relationship based on reciprocal influence and "communal purpose between leaders and collaborators in which both are moved to higher levels of moral development and motivation and by affecting authentic and proposed change, they affect real, intended change" (Freiberg & Freiberg, 1996, p. 298). Spillane and Diamond (2007) engaged in this discussion by explicating a leader's influence as seen through actions taken to address certain functions. In other words, leadership creates a cause to want the person's leadership thus agreeing with early studies of DeBruyn (1997).

Leithwood (2005) described leadership simply as a source that comes from many areas such as schools, teachers, parents, and state officials. He concluded that leadership has two

functions: establishing directions and exercising influences, thereby recognizing, as many others have, that leadership is a complex concept. Earlier, O'Toole (1996) described leadership as encouraging people to relinquish their unproductive habits in order to achieve fresh effects.

Pfeffer (1977) posited that while there are numerous leadership studies, the concept of leadership remains unclear.

Major reviews of leadership literature declare that effective leadership must have the component of self-efficacy even though research has not demonstrated how self-efficacy affects leadership (Bandura, 1977; Bass, 1990; House & Aditya, 1997; Northouse, 2007; Yukl & Van Fleet, 1992). McCormick (2001) argued that this is so because self-efficacy is a trait and not part of an established theory but asserts that a relationship does exist between a leader's self-efficacy and successful leadership. McCormick adamantly stated that self-confidence was similar to Bandura's self-efficacy construct and can be used interchangeably to understand the claimed association between self-confidence and leader effectiveness. He also boldly stated that research is absent in the theoretical explanation of the association between self-confidence (or self-efficacy) and leadership, but that any major review of leadership literature declares that effective leadership must have the component of self-efficacy (Bandura, 1997; Bass; House & Aditya; Northouse; Yukl & Van Fleet).

Astin and Astin (2000) posited that in the arena of leadership, academia reflects the values and vision of society as it intertwines with the leadership offered by the college environment. Students are, therefore, attracted to their academic leaders. Thus, higher education plays a major part in shaping the quality of leadership, acting as a birthing place for society's future leaders; leadership is developed in this process. McIntire's (1989) earlier argument agreed with Astin and Astin in that leadership is fostered when students engage in activities such as

student government and clubs. This gives students a chance to practice their leadership skills. However, they debated that leadership is not based in one single discipline; no one academic discipline has ownership.

Research

Although some research was identified comparing the leadership traits of dual-enrolled homeschooled high school students with the traits of traditionally schooled students in college, Leithwood (2005) argued that there is a lack of research relating to the leadership practices of dual-enrolled students. In this literature review, there were empirical leadership studies on the effect of leadership by school-level leaders, but a paucity of research on student leadership and self-efficacy of dual-enrolled students (Leithwood; Pfeffer, 1977).

Cress, Astin, Zimmerrman-Oster, and Burkhardt (2001) conducted a longitudinal study of 4 years on two groups of college students that yielded a sample of 875 respondents. Descriptive and multivariate analyses were performed. The descriptive analyses examined the self-reported outcomes for program participants compared to students who started college at the same time but did not participate in leadership activities. Multivariate analyses were conducted using a hierarchical regression analysis model. Significant differences were tested using analysis of variance for identified variables. Results were similar to Kleon and Reinhart's (1998) previous research in an *ex-post facto* study comparing variables prior to the students' participation in leadership programs to the same variables after the students graduated from college. A *t*-test analysis supported that the students' perceptions of leadership skills were significantly higher than before the students' participation in the program [alpha (α) = .05].

Leithwood (2005) posits that most empirical evidence on the effect of leadership comes from research on school-level leaders with rare inquiry about the effect on students. The effect of

leadership on students has been discussed in previous qualitative case studies but lacked external validity or generalizability (Gezi, 1990; Reitzug & Patterson, 1998). However, discussion has been conducted in large-scale quantitative studies on overall leader effects (Hallinger & Heck, 1998) and in research inquiries on the effect of leadership practices such as the meta-analysis by Waters, Marzano, and McNulty (2003).

A study by Chapman, Toolsie-Worsnup, and Dyck (2006) examined schools in three different districts using leadership programs and their impact on the students' achievement and development in leadership following the programs. Research supports that these students gained leadership skills following their participation in the leadership programs.

Furthermore, research as early as 1960 by Bass supported that the student reflects the childhood experiences in the group in which the student is involved. Bennis (1985, 2007), in his early studies, proposed that the family was the foundation for future leadership involvement. Pace (1987) found in his early study a link between the family and leadership, positing that scholarship did not seem to have the same impact. Bass' (1990) research agreed with Pace in that the student not only brings current influences but also childhood experiences to the group in which he or she is involved. The research of Newcomb (2001), and Tucker and McCarthy (2001) agreed with Bennis (1985) about the importance of family involvement. For the homeschooled student, the family offers a strong foundation in family values, support, and modeling, all supportive of the development of leadership (Feltz, 1988).

Several researchers, including Pace (1987) and Newcomb (2001), suggested that the homeschool parent within the home environment inspires the student to achieve academically and to participate in leadership roles while in college. The parent, then, is the academic leader for the homeschooled student. This parental influence provides the homeschooled student a firm

foundation for a smooth integration into public school activities (Gatherole, 2003; Waal & Theron 2003). Montgomery (1989) studied situations that enhanced leadership and found that homeschooled children ages 10 to 21 were not isolated from social interaction, concluding that homeschooled children develop leadership skills as well as traditionally schooled children.

Studies by Ray (2003) showed that homeschooled students are very independent and interactive with others and become excellent citizens. Bennis (2007) proposed that the homeschool experience, along with the family influence, were the foundation for future leadership involvement. In short, dual-enrolled homeschooled students uniquely connect the values of their family value systems with development of leadership (Leithwood, 2005). Furthermore, Astin and Astin (2000) found that both home and college environments provided opportunities that fostered leadership skills, hence an expansion of this concept.

Galloway and Sutton (1995) utilized the components of academic, cognitive, spiritual, affective-social, and psychomotor criteria for measuring the success of 60 students at a private university. Their research supported that homeschooled students held a significant number of appointed and spiritual leadership positions, thus engaging in more semesters of leadership service than students from private schools. However, results of this study supported no significant difference between homeschooled students and public school students regarding leadership positions held.

Yet the earlier studies of Gohlson (1985) and Locke (1985) identified other variables such as GPA, rank in class, and collegiate grades as independent of activities that provide opportunities for developing leadership skills. Chemers (2000) confirmed Gohlson's findings, as did Pace (1987) and Bass (1990), who also established that leadership is connected to leadership opportunities and not limited to scholarship.

Today, university settings are birthing places for society's leaders, developing and fostering leadership. Everyone in the college setting, including students, has the potential of being a leader. Furthermore, Locke (1991) argues that leadership is developed when students participate in activities on the school campus as this allows students to practice leadership skills. Nevertheless, since research is deficient in the area of dual-enrolled homeschooled and public school students on self-efficacy and leadership practices, studies in this area are needed, especially since these student groups comprise a fast-growing population which is impacting the academic arena. Hence, these dual-enrolled students will serve as an appropriate source of information (Ray, 2004b).

Summary

This literature review of traditional education examined concerns about a lack of college readiness with a more extensive review of traditional schooling (public school) and its alternative, homeschooling. This review was followed by a comparison of homeschooled and traditionally schooled students in college settings. The research supported the need for educational reform. This reform suggested the format of dual enrollment which focused on two groups of students, the public school student in collegiate high school and the homeschooled high school student. Finally, the review included studies on self-efficacy and leadership practices of these two groups of students. Peripheral research and older studies were included because of the paucity of research in the areas of self-efficacy and leadership practices of homeschooled and traditionally schooled students. Thus, new studies in this area offer researchers a unique opportunity to compare the self-efficacy and leadership practices of dual-enrolled homeschooled high school students and public school students in collegiate high schools.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

This chapter addresses the methods and procedures which were used to answer the research questions guiding this study. The philosophical stance relevant to this study was framed in the context of social constructivism with the phenomena of self-efficacy and leadership practices. In this study, these phenomena were examined in the context of Bandura's (1989) Social Cognitive Theory (SCT). The chapter further delineates the purpose, research questions, and null hypotheses. The causal-comparative research design and the quantitative paradigm were utilized to conduct the research of this study. The population and sampling procedures, instrumentation, and data analysis procedures are also described in this chapter.

Philosophical Perspective

Epistemology is the embodiment of research that is embedded within the philosophical stance (Hofer, 2001). According to Crotty (1998), epistemology is defined as the "nature of knowledge" (p. 242), and it provides "a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate" (p. 10). Thus, the importance of epistemology is the bridging of theory and practice. This philosophical stance is expressed as the framework of "worldviews and perspectives" (Creswell, 2007, p. 3). This framework may be described as social constructivism, with phenomenology as one strategy for inquiry. The philosophical stance of social constructivism supports the view that truth comes from one's engagement with the world, the way the individual makes sense of the world based on the uniqueness of what each person experiences. This, then,

becomes one's ontology (Crotty, 2005). The ontological approach of this study encompasses the selected students and the phenomena of self-efficacy and leadership practices.

Husserl (1913) defines phenomenology in terms of how experiences are described and interpreted (Donalek, 2007). Description and interpretation become the focus of inquiry or research. To study the phenomena of self-efficacy and leadership practices in dual-enrolled homeschooled high school students and public school students in collegiate high schools, this study used the philosophical framework of social constructivism. These high school students have comparable lived experiences. Further, there is an exchange grounded in the students' believed constructions encompassing self-efficacy and leadership experiences. DePree (1998) posits that leadership must first be defined in terms of this reality.

However, Crotty (2005) believes that phenomenology and social constructivism are closely "intertwined" (p. 12). Multiple interpretations of these lived experiences are influenced by both internal and external factors. Phenomenology produces an understanding of commonalities in the human experience, emphasizing the lived experiences of the phenomenon. In this quantitative study, the phenomena of self-efficacy and leadership practices of dual-enrolled homeschooled high school students and the public school students in collegiate high school were operationalized. Furthermore, the philosophical perspective of social constructivism was aligned to this quantitative research and was powered by the phenomenological approach. Therefore, utilizing social constructivism to study self-efficacy and leadership practices provided the researcher the opportunity to investigate these constructs.

Theoretical Framework

In this study, Bandura's (1989) Social Cognitive Theory (SCT) guided the exploration of the phenomenon of self-efficacy and supplied a framework for the clarification of the meaning of self-efficacy. According to SCT, an individual develops perceptions of his or her own abilities and characteristics that guide behaviors (Bandura). These self-reflective perceptions act as a fundamental factor in initiating behavior necessary for performance (Tucker & McCarthy, 2001). At the same time, self-efficacy can be developed via learning, modeling, experience, persuasion, and feedback, and is furthered strengthened by success (Tucker & McCarthy).

Social Cognitive Theory centers on the foundation that self-efficacy is vital to leadership as it affects goals, motivation, and skill (McCormick, 2001). Hence, the self-efficacy of dual-enrolled homeschooled high school students and public school students in collegiate high schools impacts their leadership practices. For this study, the Kouzes and Posner's Model of Leadership (Kouzes & Posner, 2007) guided the phenomenon of leadership practices. The Kouzes and Posner's Model of Leadership includes five practices common to "personal-best leadership experiences" (p. 13). These practices are known as the Five Practices of Exemplary Leadership® and are as follows: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart (Kouzes & Posner).

Purpose of Research

The purpose of this study was to compare the self-efficacy and leadership practices of two categories of dual-enrolled students. Accordingly, the independent variable for this study, category of dual-enrolled students, had two levels, homeschool and public school. The dependent variables, self-efficacy and leadership practices, were measured on the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) and the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007), respectively.

Research Questions and Null Hypotheses

The research questions that guided this study were:

- 1) Is there a difference in self-efficacy as measured by the General Self Efficacy
 Inventory of dual-enrolled students between those who are homeschooled and
 those who are public school students in collegiate high school?
- 2) Is there a difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school?

The null hypotheses for this study were:

Ho₁: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school.

Ho₂:There is no difference in leadership practices as measured by the Student

Leadership Practices Inventory-Self of dual-enrolled students between those

who are homeschooled and those who are public school students in collegiate
high school.

Research Design

This study followed a quantitative research approach to investigate the stated problem. The research design of this study was causal-comparative or *ex-post facto*, which is sometimes viewed as correlational research, a form of associational research which attempts to identify the evidence for causation of differences that pre-exist between or among groups (Fraenkel &

Wallen, 2006; Kerlinger & Lee, 2000). In this study, the independent variable, the category of dual-enrolled students, had two levels: homeschooled students and public school students. The study attempted to explore the dependent variables of self-efficacy and leadership practices of these two categories of dual-enrolled students.

Population and Sampling Procedures

The population for this study consisted of approximately 225 dual-enrolled students in a county in the southeastern United States during a major academic term in which academic learning was offered in both in traditional (public school) and non-traditional (homeschooling and collegiate high school) formats. The study used a non-random sample comprised of the first 30 volunteer respondents selected for each of the two categories of dual enrollment, giving a total of 60 participants. Participation in this study was completely voluntary. Students could choose to withdraw from the study or cease participation at any time without negative consequences. The confidentiality and anonymity of participants were maintained as there were no identifying factors other than the type of the dual-enrollment program.

Setting for Study and Data-Collection Procedures

The site for this proposed study was a county in the southeastern part of the United States where academic learning was offered in two formats: traditional (public school) and non-traditional (homeschooling and collegiate high school).

Student Participants

This research was conducted under the scrutiny and guidelines of the researcher's Institutional Review Board (IRB) and the Research and Accountability Office in the county of the school system overseeing the collegiate high school. For each of the two groups of dual-enrolled students, a third-party volunteer distributed a packet containing a Parental Informed Consent Form (Appendices A and B), which included information for parents who were asked to give consent for their dual-enrolled children to take part in the research. Additionally, the Parental Informed Consent form included an entry for the student's e-mail address which was used to e-mail the student a link to the survey housed on SurveyMonkeyTM. Upon receiving this form, the parent was encouraged to return the signed Parental Informed Consent form in the provided self-addressed stamped envelope addressed to the third-party volunteer within a one-week period. Parents kept a copy for their records. The returned signed Parental Informed Consent forms will be kept in a locked file by the third- party volunteer for 5 years at which time the files will be destroyed. The researcher will not have access to this file.

Once the returned envelopes with the Parental Informed Consent forms were received, the third-party volunteers used the students' e-mail addresses provided on the Parental Informed Consent forms to e-mail the students an E-mail Request (Appendix C) that provided an invitation to voluntarily participate in the study, as approved by their parent, and gave the purpose and overview of the study. No students' names were included on the Parental Informed Consent

forms.

Once on SurveyMonkeyTM, students who decided to voluntarily participate in the online survey acknowledged their voluntary consent (assent) to participate by entering and completing the survey. Since participation in the study was strictly voluntary, the invitation included the right of the student to voluntarily assent to or dissent from participation at any time, without negative consequences, along with the right to anonymity and confidentiality, and the right to no coercion.

Student participants accessed SurveyMonkeyTM via the web, so confidentiality was furthered assured. In addition, SurveyMonkeyTM was asked by the researcher to disable the SSL before data collection, thereby assuring that results received by the researcher were truly anonymous and there was no record kept of either IP addresses or linkages that could identify a student. Parental Informed Consent forms that were returned and did not give permission for student participation or that failed to provide an e-mail address were destroyed by the third-party volunteer.

The instruments selected for this study (i.e., General Self-Efficacy Scale and Student Leadership Practices Inventory-Self) were available online for 2 months for the convenience of the participants and for ease of the researcher to obtain data in an anonymous format. Data were collected and utilized from the first 30 volunteers (in each of the dual-enrollment categories) for a total of 60 participants in the sample.

The participant's information will be held in confidence to the extent permitted by law.

The collected data and its results will be kept locked in the researcher's office domain for 5 years, after which time the data will be shredded.

Instrumentation

General Self-Efficacy Scale

The self-administered General Self-Efficacy Scale was developed to determine a general overall sense of perceived self-efficacy. The scale was developed by Jerusalem and Schwarzer in 1979 with the purpose of creating a scale that assesses a sense of perceived self-efficacy, which mirrors an optimistic assurance. This perceived belief engages a person's effort. Reliability was measured utilizing Cronbach's α, yielding coefficients ranging from .76 to .90 with the stated average readings in the .80s (Schwarzer & Jerusalem, 1995).

The General Self-Efficacy Scale takes approximately 5 minutes to administer and is suitable for a broad range of applications including adolescent populations (Schwarzer & Jerusalem, 1995). This instrument is made up of 10 items which measure behaviors attributed to the success of engaged behavior involving a task at hand. The instrument is built on a Likert-type 4-point scale in which responses include: 1 = Not at All True, 2 = Hardly True, 3 = Moderately True, and 4 = Exactly True (Jerusalem & Schwarzer, 1992).

Student Leadership Practices Inventory-Self Form

Many leadership programs are founded on the context of the business world versus that of academia; thus questions are raised about its use for academia (Freeman, Knott, & Schwartz, 1996). However, the Student Leadership Practices Inventory is one of a few leadership instruments solely focused on college students as opposed to the inventories used in business environments (Posner, 2004). The Leadership Practice Inventory is based on case studies of 1,200 managers. As indicated by case studies conducted by Kouzes and Posner (2006) and Arendt (2004), content analysis supports a pattern of behaviors that were utilized by effective

leaders; these case studies validate the need and appropriateness of best leadership behaviors.

This inventory was the initial step used before developing the student form.

Further case studies were conducted on college students to ascertain student leadership behaviors (Brodsky, 1988; Posner & Brodsky, 1993). The Student Leadership Practices Inventory was pilot tested and in-depth discussions ascertained if the inventory statements were appropriate for student leaders. Empirical studies utilizing multiple regression analyses support that the five identified leadership practices account for 65% to 80% of the variance in assessments of leadership effectiveness (Posner & Brodsky). Cronbach's α internal reliability coefficients for this instrument ranged from .63 to .94 (Arendt, 2004; Posner & Brodsky, 1993, 1994). Additionally, reliability for this instrument was established using test-retest methods, yielding correlation coefficients of above .51 (Pugh, 2000).

The same groups used in the initial empirical study were utilized for revision of the Student Leadership Practices Inventory which was produced in two forms: the *Self* form completed by the student and the *Observed* form completed by the person who directly observes the leadership practices of the student. Results reflected that two-thirds of the statements remained the same with only four statements edited for clarification. Cronbach's α was .79 (Adams & Keim, 2002; Posner & Brodsky, 1992, 1994). The validity analysis conducted on the revised edition of the Student Leadership Practices Inventory instrument confirmed acceptable validity (Brodsky, 1988; Schwartz & Gimbel, 2000).

The Student Leadership Practices Inventory-Self measures leadership competencies, rating the frequency of described behaviors that are compartmentalized into the Five Practices of Exemplary Student Leadership model®:

• Model the Way: operationalizes the role needed for leadership

- Inspire a Shared Vision: motivates others in agreement with stated vision
- Challenge the Process: thinks out of the box and presents solutions
- Enable Others to Act: encourages others while tapping into their own strengths
- Encourage the Heart: encourages an intrinsic motivation (Kouzes & Posner, 2007).

The self-administered Student Leadership Practices Inventory-Self is a 30-item tool built on a 5-point Likert-type scale requiring approximately 10 minutes to administer. The Likert-type 5-point scale includes the following responses: 1 = Rarely or Seldom, 2 = Once in a While, 3 = Sometimes, 4 = Often, and 5 = Very Frequently or Almost Always (Kouzes & Posner, 2007).

Data Analysis

The General Self-Efficacy Scale and the Student Leadership Practices Inventory-Self instruments were scored manually and reviewed by the researcher for accuracy. Data were analyzed using the statistical data analysis capabilities of Microsoft Excel (2007). Upon entry of collected data, the mean and standard deviation were determined for each dependent variable (i.e., self-efficacy and leadership practices). According to Fraenkel and Wallen (2006), the initial step in the analysis of data in a causal-comparative study is establishing frequencies, the mean, and standard deviation of each group. The null hypotheses for this study were tested using independent *t*-tests at the .05 level of significance. A *t*-test is a parametric test dependent upon two assumptions: 1) a normal distribution for the population, and 2) homogeneity of variance of participants. The *t*-test for difference between means was appropriate because the two groups being studied were totally independent of one another, and the *t*-test compared the difference between the means relative to the variability of the sores. Also, the *t*-test is the most commonly used test in causal-comparative research. An analysis of variance, a more generic form of the *t*-

test, was not employed since determining interaction between groups was not a goal of this study (Kerlinger & Lee, 2000).

Once the *t*-test was calculated, it was checked in a *t*-table of significance to see whether its value was large enough to presume that the difference between the two groups was not likely to have happened by chance. For this study, an alpha level of .05 was used. It can be anticipated that a difference could occur by mere chance in 5 out of 100 occurrences; hence, if a statistically significant difference occurs, there is a 95 percent chance that the study results are not due just to chance. The .05 level is acceptable in order to reduce the risk of rejecting the null hypothesis, thus making a Type 1 error and concluding that there is difference between the two groups when, in fact, there is no difference (Kerlinger & Lee, 2000). Knowledge of the alpha level and the degrees of freedom (df) obtained from subtracting 2 from the total number of participants in each group allows the researcher to ascertain the *t*-score from a standard table of significance (Mendenhall, 1975), thus determining if the score is large enough to be significant. For this study, Microsoft Excel (2007) was utilized to assist in these findings.

Summary

This chapter described a comparison of self-efficacy and leadership practices of two categories of dual-enrolled students, homeschooled students and public school students in collegiate high schools, and also captured the philosophical framework of social constructivism used to investigate these constructs. In this study, Bandura's Social Cognitive Theory (SCT) supplied a framework for clarification of the meaning of self-efficacy. Self-efficacy lends itself to activities that foster leadership (Montgomery, 1989). Bandura's (1989) Social Cognitive Theory and Kouzes and Posner's (2007) Model of Leadership address the constructs of self-efficacy and leadership respectively.

The chapter outlined the purpose of the research study, the research questions and the null hypotheses, and the research design. Details were given in the description of the research study's population and sampling procedures, and setting and data-collection procedures. The process of data collection was outlined with emphasis on supplying necessary documentation for the IRB at the researcher's university and the county in which the study was conducted. Provisions were made to ensure that participation in the study was voluntary, and the invitation to students included the right to refuse participation without negative consequences. The students' right to privacy and confidentiality were also stated and ensured. Students accessed SurveyMonkeyTM remotely, so confidentiality was further assured.

The survey instruments were described including their validity and reliability. Finally, the method of data analysis and the testing of the null hypotheses using independent *t*-tests at the .05 level of significance were described.

CHAPTER IV

RESULTS

Introduction

The purpose of this study was to compare self-efficacy and leadership practices of two categories of dual-enrolled students. The intent was to determine if the category mode, homeschool or public school, made a difference in the self-efficacy and leadership practices of dual-enrolled students using standardized instruments validated in previous research. The research questions that guided this study were: 1) Is there a difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school? and 2) Is there a difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school?

The hypotheses, stated in the null, were as follows: Ho₁: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school; and Ho₂: There is no difference in leadership practices measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Accordingly, the independent variable for this study, category of dual-enrolled students, had two levels, homeschool or public school. For the purpose of the study, the dependent variables, self-efficacy and leadership practices, were measured and operationally defined as scores on the General Self Efficacy Scale

(Jerusalem & Schwarzer, 1992) and on the Student Leadership Practices Inventory-Self (Kouzes & Posner, 2007), respectively.

During the spring 2010 semester, 60 dual-enrolled homeschooled high school and public collegiate high school students participated in this study which compared their self-efficacy and leadership practices. Having previously received parental permission, students in this non-random sample were sent an E-mail Request (Appendix C) to voluntarily participate in the study, with the assurance of anonymity, confidentiality, and no coercion. This E-mail Request directed consenting participants to SurveyMonkeyTM, where the survey was housed. The survey contained a Cover Letter (Appendix D) which gave student participants a detailed explanation of the study along with the link to complete the voluntary and anonymous survey. Once on SurveyMonkeyTM, students who decided to voluntarily participate in the online survey acknowledged their voluntary consent (assent) to participate by entering and completing the anonymous survey instruments identified for this study (Appendices E and F).

Since participation in the study was strictly voluntary, the invitation included the right of the student to voluntarily assent to or dissent from participation at any time, without negative consequences, and no coercion. The survey consisted of the General Self-Efficacy Scale consisting of 10 Likert-type items (Appendix E) and the Student Leadership Practices Inventory-Self consisting of 30 Likert-type items (Appendix F).

This chapter reports the results found in the statistical analyses described in Chapter III.

This chapter first reviews the population and response rate data and includes a discussion of the survey instruments, the null hypotheses, and the research questions.

Characteristics of Participants

Dual-enrolled homeschooled high school and collegiate high school students in a county in the southeastern United States during a major academic term were the target population used for this study. From a population of approximately 225 dual-enrolled students, a non-random sample of 60 students who met the specified criteria (dual-enrolled homeschooled high school or collegiate high school students in 11th or 12th grade) was secured from third-party volunteers representing each group of students. Thus, the non-random sample for this study consisted of 30 collegiate high school students and 30 homeschooled high school students, giving a total of 60 volunteer participants.

Response Rates to the Study

Final response rates occurred in two tiers. First, among a total of 225 surveys that were distributed by third-party volunteers, the first 30 parental permission forms received from each category of students represented a return rate of 17 % (30 out of 175) for the collegiate high school students and 60% (30 out of 50) for the homeschooled high school students. Second, from these 60 parental permission forms received, 30 student participants from each category of students responded to the two surveys on SurveyMonkeyTM, giving a total student participant response rate of 27% (60 out of 225) (Table 1). However, as a point of interest, from the initial parental permission responses to the 60 student participants' responses there was no mortality therefore, reflecting an actual response rate of 100 % return from the student participants.

Furthermore, all participants provided a response for every item on the two surveys; hence, there were no missing data. Furthermore, causal comparative studies call for a sample of 30 per group; thus sample size remained adequate for this study (Fraenkel & Wallen, 2006).

Table 1
Surveys Distributed and Returned Responses

	Frequency	Percent
	Distributed	Returned
	(N)	(N)
Collegiate	175	(30) 17%
Homeschool	50	(30) 60%
Total	225	(60) 27%

This study utilized two instruments, the 10-item General Self-Efficacy Scale (Appendix E) to measure the dependent variable, self-efficacy, and the 30-item Student Leadership Practices Inventory-Self (Appendix F) to measure the dependent variable, leadership practices. Each instrument has been used in previous research and has demonstrated sound psychometric properties.

General Self-Efficacy Scale

The self-administered General Self-Efficacy Scale (Schwarzer & Jerusalem, 2004) was developed to determine a general overall sense of perceived self-efficacy. This perceived belief engages a person's effort. Reliability was measured utilizing a Cronbach's α of .76 to .90 with the stated average readings in the .80s (Schwarzer & Jerusalem).

The instrument was composed of 10 items which measure behaviors attributed to success of engaged behavior of a task at hand. It is built on a Likert-type scale with a range of 1 (Not at All True), 2 (Hardly True), 3 (Moderately True), and 4 (Exactly True). This instrument is suitable for a broad range of applications including adolescent populations.

Student Leadership Practices Inventory-Self

The Student Leadership Practices Inventory-Self was developed by Kouzes and Posner (1993) with the purpose of addressing leadership practices of students. The Student Leadership Practices Inventory is one of a few leadership instruments solely focused on college students as opposed to the inventories used in business environments (Posner, 2004). Case studies were conducted with college students to validate the need and appropriateness of best leadership behaviors (Brodsky, 1988; Posner & Brodsky, 1993). The same groups used in the initial empirical study were utilized for the revision of the Student Leadership Practices Inventory produced in two forms: the *Self* form and the *Observed* form. For this study, the Student Leadership Practices Inventory-Self form (Kouzes & Posner, 2007) was used; this form measures leadership competencies rating the frequency of described behaviors that are compartmentalized into the Five Practices of Exemplary Student Leadership model®:

- Model the Way: operationalizes the role needed for leadership
- Inspire a Shared Vision: motivates others in agreement with stated vision
- Challenge the Process: thinks outside of the box and presents solutions
- Enable Others to Act: encourages others while tapping into their own strengths
- Encourage the Heart: encourages an intrinsic motivation (Kouzes & Posner, 2007).

Initially, the Leadership Practice Inventory was based on case studies with content analysis supporting a pattern of behaviors that were utilized by effective leaders with a Cronbach's α reliability ranging from .63 to .94 (Arendt, 2004; Kouzes & Posner, 2006). This inventory was the initial step used for revision of the student *self form* with a Cronbach's α reliability of .79 (Adams & Keim, 2002). Additionally, reliability for this instrument was established using test-retest methods, yielding correlation coefficients of above .51 (Pugh, 2000).

The self-administered instrument was composed of 30 items and used a Likert-type 5-point scale with a range of 1 (Rarely or Seldom), 2 (Once in a While), 3 (Sometimes), 4 (Often), and 5 (Very Frequently or Almost Always).

Data Analysis

According to Fraenkel and Wallen (2006), the initial step in the analysis of data in a causal-comparative study is establishing frequencies, the mean, and standard deviation of each group. Descriptive statistics utilized in this study included means, standard deviations, percentages, and frequencies to ascertain student response rates by category of student. The General Self-Efficacy Scale and the Student Leadership Practices Inventory-Self inventories were scored manually and reviewed by the researcher for accuracy. Data were also analyzed using the statistical data analysis capabilities of Microsoft Excel (2007). In order to establish the make-up of the sample population, descriptive data were part of the study. In each category, the collegiate high school students and homeschooled high school students, the means of students' responses on the two surveys measuring self-efficacy and leadership practices were ascertained. Analyses using a two-tailed *t*-test for independent samples at the .05 alpha level of significance were run to determine if there were any statistically significant differences between the two categories of students addressing the dependent variables of self-efficacy and leadership practices.

General Self-Efficacy Scale

The General Self-Efficacy Scale was scored for each participant by summing the responses of each of the 10 items in the instrument. Behaviors related to self-efficacy were rated using a Likert-type scale that ranged from 1 (Not at All True) to 4 (Exactly True). Participants had the potential to score within a range of 10 to 40 points. Based on the raw data collected for

this study from the General Self-Efficacy Scale, the mean and standard deviation scores for the collegiate high school students were 34.80 and 4.54, respectively, with minimum and maximum mean scores of 28 and 40, respectively. The mean and standard deviation scores for the homeschooled students were 33.55 and 7.62, respectively, with minimum and maximum mean scores of 26 and 40, respectively (Table 2).

Table 2

Descriptive Statistics of Responses on General Self-Efficacy Scale

Categorical Groups	Mean	St. Deviation	Minimum	Maximum	
Collegiate High School Students	34.80	4.54	28	40	
Homeschooled Students	33.55	7.62	26	40	

Student Leadership Practices Inventory-Self

The Student Leadership Practices Inventory-Self was scored for each participant by summing the responses of each of the 30 items in the instrument. Behaviors related to leadership practices were rated using a Likert-type scale that ranged from 1 (Rarely or Seldom) to 5 (Very Frequently or Almost Always). Participants could potentially score within a range of 30 to 150 points. Based on the raw data collected for this study from the Student Leadership Practices Inventory-Self, the mean and standard deviation scores for the collegiate high school students were 104.20 and 18.13, respectively, with minimum and maximum mean scores of 73 and 120, respectively. The mean and standard deviation scores for homeschooled students were 110.54 and 18.16, respectively, with minimum and maximum mean scores of 51 and 138, respectively (Table 3).

Table 3

Descriptive Statistics of Responses on Student Leadership Practices Inventory-Self

Categorical Groups	Mean	St. Deviation	Minimum	Maximum
Collegiate High School Students Homeschooled Students	104.20	18.13	73	120
	110.54	18.16	51	138

Hypotheses Testing

This study sought to test each of the two hypotheses through statistical analyses using a two-tailed independent *t*-test in which the mean scores on each category of students' responses for the dependent variables of self-efficacy and leadership practices were compared to determine whether the difference between the two means was statistically significant at an alpha level of .05. The first null hypothesis stated: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school, and the second null hypothesis stated: There is no difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school.

Microsoft Excel (2007) was used for statistical analysis. The researcher failed to reject the first null hypothesis as there was no significant difference at an alpha level of .05. The obtained t-value was -0.76, and the critical value for α =.05 with 58 df was 2.0017. In addition, the researcher failed to reject the second null hypothesis as there was no significant difference at an alpha level of .05. The obtained t-value was 1.31, and the critical value for α =.05 with 58 df was 2.0017 (Table 4).

Table 4

Independent t-test for Self-Efficacy and Leadership Practices Scores

	t-test Value	df	Sig. (2-tailed)	Difference of the Means
Self-efficacy	-0.76	58	0.4433	-1.25
Leadership Practices	1.31	58	0.1812	6.34

Research Questions

The following research questions guided this study and were addressed statistically by using a two-tailed independent *t*-test through analysis of data provided by the sample population:

1) Is there a difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school? 2) Is there a difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school? Based on the data presented in this study, there is no significant difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school, and there is no significant difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school.

Summary

To address the two research questions of this study, descriptive statistics, including percentages, frequencies, means, standard deviations, and maximum and minimum scores, were used for both categories of students (i.e., collegiate high school students and homeschooled

students) to ascertain student response rates by category of student. Statistical analysis employing Microsoft Excel (2007) determined if there were any differences between the scores of the two categories of dual-enrolled students on the General Self-Efficacy Scale and the Student Leadership Practices Inventory-Self. The intent was to determine if the category mode, homeschool or public school, made a difference in self-efficacy as measured by the General Self Efficacy Inventory and leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students. Data analysis utilizing the *t*-test at the alpha level of .05 determined that there was no significant difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school. Also, the analysis utilizing the t-test at the alpha level of .05 showed no significant difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school. Ultimately, based on the results, the researcher failed to reject the null hypotheses addressing self-efficacy and leadership practices. The implications of these results, limitations of this study, and recommendations for future research will be discussed in the following chapter.

CHAPTER V

DISCUSSION

Introduction

The theoretical framework of this study was based on Bandura's (1989) Social Cognitive Theory (SCT), which supplies a framework for the meaning of self-efficacy. According to SCT, an individual develops perceptions about his or her own abilities and characteristics that guide behavior (Bandura). Self-efficacy builds on these self-reflective perceptions and is fundamental to initiating behavior necessary for performance and social integration (Tucker & McCarthy, 2001). An outward manifestation of this social integration maturity is leadership behavior (McCormick, 2001; Pink, 2001). In short, a student's engagement in college-level courses at the high school level reflects self-efficacy, and, in turn, demonstrates motivation and preparation for further college attendance (University of Arizona, 1999). Montgomery (1989) argued that self-efficacy lends itself to activities that foster leadership.

In academia, Astin and Astin (2000) posited leadership was fostered when students engaged in activities such as student government and clubs; thus an outward manifestation of socialization extends to self-efficacy in leadership. Tucker & McCarthy (2001) referenced the relationship between self-efficacy and leadership while McCormick (2001), exchanging the concept of self-confidence with that of self-efficacy, inferred that self-confidence impacts leadership through leadership self-efficacy. McCormick argued that most leadership literature reviews claim self-confidence or self-efficacy is necessary for effective leadership (Northouse, 2007). However, even with expert opinions, there is a continual paucity of studies that have examined self-efficacy and leadership practices of dual-enrolled high school students.

One model that addresses the construct of leadership is the Kouzes and Posner's (2007) Model of Leadership, which includes practices common to "personal-best leadership experiences" (p. 13). These Five Practices of Exemplary Leadership are as follows: Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart.

The goal of this causal-comparative study, using the quantitative paradigm, was to compare self-efficacy and leadership practices of two categories of dual-enrolled students. On the subjects of self-efficacy and leadership practices, the literature referenced self-efficacy of the homeschooled students, finding that homeschooled students score higher than traditional students utilizing various scales of measurement (Leithwood, 2005; Ray 2003, 2004). Leadership practices focused mainly on traditional college students. Galloway and Sutton's (1995) pivotal study addressed homeschooled students in college, finding that homeschooled students remained statistically similar to public school graduates. Peripheral research and older studies were included in this study because of the paucity of research in the areas of self-efficacy and leadership practices of these two groups of students. Still, few, if any, studies address the self-efficacy and leadership practices of dual-enrolled homeschooled and public school students even though these groups of students are a significant growing population impacting the academic scene.

Based on the literature review, the primary research questions for this study were: 1) Is there a difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school? 2) Is there a difference in leadership practices as measured by the

Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school?

The primary null hypotheses tested in this study were: Ho₁: There is no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Ho₂: There is no difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school.

This chapter will present a summary of the results based on the research methodology in Chapter III and the literature review discussed in Chapter II. It will also provide implications for current practice, recognize the limitations of this study, and make recommendations for future research.

Summary of Findings

This study compared self-efficacy and leadership practices of two categories of dual-enrolled students. A total of 60 responses were received from the original sample population of 225 11th and 12th grade dual-enrolled homeschooled and collegiate high school students for an overall response rate of 27%. The use of causal-comparison analysis calls for a minimum of 30 participants per group identified in the study; thus, the sample size was considered adequate for this study.

Third-party volunteers obtained signed parental permission forms for students to participate in the study, which was conducted on SurveyMonkeyTM, thus providing complete anonymity for the students participating. Data analysis using the t-test at the alpha level of .05 was conducted utilizing the statistical data analysis capabilities of Microsoft Excel (2007). A

mean score for the Self-Efficacy Scale and the Student Leadership Practices Inventory-Self was calculated for each category of students. The dependent variables of self-efficacy, as measured on the Self-Efficacy Scale, and leadership practices, as measured on the Student Leadership Practices Inventory-Self form, were used to compare two categories of dual-enrolled students. Descriptive statistics included percentages, frequencies, means, standard deviations, and maximum and minimum scores, and were used in this study for both categories (i.e., collegiate high school students and homeschooled high school students) to ascertain student response rates per category of student.

Based on the analysis utilizing the t-test at the .05 alpha level, the researcher failed to reject the first null hypothesis, which stated that there was no difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. The obtained t-value was -0.76, and the critical value for α =.05 with 58 df was 2.0017. Also, the researcher failed to reject the second hypotheses, tested at the .05 alpha level, which stated that there was no difference in leadership practices of dual-enrolled students as measured by the Student Leadership Practices Inventory-Self between those who are homeschooled and those who are public school students in collegiate high school. The obtained t-value was 1.31, and the critical value for α =.05 with 58 df was 2.0017.

Implications

Participants in this study were comprised of dual-enrolled students with different educational backgrounds, either as homeschooled or collegiate high school students attending the same college for their dual-enrollment experience. What is implied from the results of this causal-comparative study is that the category of education, homeschool or public collegiate

school, has no significant difference on the variables of self-efficacy as measured by the General Self Efficacy Inventory and leadership practices as measured by the Student Leadership Practices Inventory-Self. Hence, data analysis found no difference between these two groups of students resulting from the effect of the variable self-efficacy or the variable leadership practices.

A lack of difference between homeschooled students and public collegiate students in terms of self-efficacy implies there is less need for concern regarding homeschooled students due to the underling belief that these students are sheltered and inadequate in social skills due to low self-efficacy. Of note, literature has begun to address self-efficacy in homeschooled students (Kaplan-Leiserson, 2002; Lubienski, 2000; Montgomery, 1989; Pink, 2001; Ray, 2004b). For public school students, studies show that by taking college-level courses in high school, success in college is enhanced (Green & Foster, 2003). Giuliano and Sullivan (2007) also posited that an effective way to achieve success in college was by offering college-level courses in a dual-enrollment program. Hence, the need for strong self-efficacy may be implied for college success for both groups of students.

Leadership practices also offer an area of interest as the college setting develops future leaders. In this study's literature review, there were empirical leadership studies on the effect of leadership by school-level leaders but a paucity of research on student leadership by dual-enrolled students (Leithwood, 2005; Pfeffer, 1977), especially on leadership practices in dual-enrolled homeschooled students (Chapman, Toolsie-Worsnup, & Dyck, 2006; Green & Foster, 2003; Leithwood, 2005; Newcomb & Green, 2007). This study found that there was no difference in leadership practices of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Dual-enrolled students, growing at a fast pace, are a prime population for leadership development since university

settings are birthing places for society's leaders (Astin & Astin, 2000). However, research on these two major groups of students is still in its infancy, thereby implying the need to conduct further studies on these students (Leithwood, 2005; Silver, Smith, & Greene, 2001).

Since the literature review offers a paucity of information on both categories of dual-enrolled students, the results of this study have implications for expanding knowledge of these groups of students (Leithwood, 2005; Ray, 2004b). Further implications may be developed from additional studies on dual-enrolled students beyond the variables of self-efficacy and leadership practices.

Limitations

The results of this quantitative study presented several limitations:

- 1) The population for this study consisted of 225 dual-enrolled homeschooled and collegiate high school students in a county in the southeastern United States, with a total non-random sample of 60 volunteer participants; therefore, the results may not be generalizable to other regions.
- 2) The study was conducted on SurveyMonkeyTM, an online survey tool, which may have hindered some potential participants from volunteering.
- 3) There was no comparison group of non dual-enrolled high school students.

Despite these limitations, this study may offer a framework for future studies looking at dual-enrolled homeschooled and collegiate high school students as opposed to research conducted specific to traditional college students.

Recommendations for Future Studies

The results of this quantitative study generated several recommendations:

- 1) Future studies could focus on qualitative and quantitative research to obtain information from parents, as well as students, regarding self-efficacy and leadership practices. Studies should be conducted relating to students and parents' perceptions regarding the value of homeschooling as compared to traditional schooling.
- 2) Qualitative analysis, including case studies, could provide further insight regarding benefits of homeschooling versus traditional schooling.
- Differences may exist based on gender and ethnicity which future studies could explore.
- 4) A comparison group consisting of traditionally schooled students as well as homeschooled students could be incorporated to determine if differences in selfefficacy and leadership practices exist between these groups.

Conclusions

The purpose of this study was to use standardized instruments validated in previous research to compare self-efficacy and leadership practices of two categories of dual-enrolled students to determine if the category, homeschool or public school, influenced these two variables. Approximately 225 dual-enrolled students were identified for this study, from which a non-random sample was drawn consisting of 30 (17%) collegiate high school students and 30 (60%) homeschooled students, giving a total response rate of 60 (27%).

The General Self-Efficacy Scale consisted of 10 Likert-type items and had a Cronbach's α ranging from .76 to .90 with stated average readings in the .80s (Schwarzer & Jerusalem, 1995). The Student Leadership Practices Inventory-Self form consisted of 30 Likert-type items and had a Cronbach's α reliability ranging from .63 to .94 (Arendt, 2004; Posner & Brodsky, 1993, 1994).

Analyses were conducted to determine if there were any statistically significant differences between the two categories of students involving the variables of self-efficacy and leadership practices. Therefore, descriptive statistics, including percentages, frequencies, means, standard deviations, and maximum and minimum scores, were utilized in this study to ascertain responses by student category.

On the General Self-Efficacy Scale, responses by collegiate high school students resulted in a mean score of 34.80 with a standard deviation of 4.54, while responses by homeschooled students resulted in a mean score of 33.55 with a standard deviation of 7.62. On the Student Leadership Practices Inventory-Self, responses by collegiate high school students resulted in a mean score of 104.20 with a standard deviation of 18.13, while responses by homeschooled students resulted in a mean score of 110.54 with a standard deviation of 18.16.

This study's first null hypothesis indicated there was no significant difference in self-efficacy as measured by the General Self Efficacy Inventory of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Data analysis of self-efficacy scores yielded an obtained t-value of -0.76 with a critical value of 2.0017 for α =.05 with 58 df. Therefore, the researcher failed to reject the first null hypothesis. This study's second null hypothesis indicated there was no significant difference in leadership practices as measured by the Student Leadership Practices Inventory-Self of dual-enrolled students between those who are homeschooled and those who are public school students in collegiate high school. Data analysis of leadership practices scores yielded an obtained t-value of 1.31 with a critical value of 2.0017 for α =.05 with 58 df. Hence, the researcher failed to reject the second hypothesis. In summary, based on the results, the researcher failed to reject both null hypotheses addressing self-efficacy and leadership practices.

Peripheral research and older studies were extensively included because of the paucity of research in the areas of self-efficacy and leadership practices of dual-enrolled students who are homeschooled and those who are public school students in collegiate high school. Few, if any, studies address self-efficacy and leadership practices of these two groups of students even though these students are a significantly growing population impacting the academic scene. The results of this study suggest the need for further research not only on the constructs mentioned in this paper, but also on those variables such as students' GPAs, ACT scores, age, stress levels, and critical thinking.

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APPENDIX A

PARENTAL INFORMED CONSENT FORM

Barry University Parental Informed Consent Form

Dear Homeschool Parent:

Your child's participation in a research project is requested. The title of the study is *A Comparison of Two Categories of Dual-Enrolled Students on Self-Efficacy and Leadership Practices*.

The research is being conducted by Neoka Marple Apple, a Ph.D. candidate enrolled in the Barry University Adrian Dominican School of Education, Department of Educational Leadership and Higher Education Administration, and is seeking information that will be useful in the field of education. The research will be conducted virtually through on-line surveys housed on SurveyMonkeyTM. The aim of this quantitative study is to compare self-efficacy and leadership practices of two categories of dual-enrolled students. The intent, then, will be to determine if the category mode, homeschool or public school, has an effect on self-efficacy and leadership practices on the dual-enrolled student. Being an 11th or 12th grade dual-enrolled student qualifies the student to participant in this study.

The following information will be collected from each participant. If you decide to allow your child to voluntarily participate in this research, I, as the researcher, will contact your child via the child's e-mail provided by you as the consenting parent. Your child will be asked to complete two web-based surveys of 10 and 30 Likert-style statements, which should take no more than a total of 10-15 minutes. The surveys will consist of the following instruments, The General Self-efficacy Scale and the Student Leadership Practices Inventory-Self, in a confidential and anonymous online format. The content of these instruments addresses the subjects of self-efficacy and leadership practices with the purpose to measure a general overall sense of perceived self-efficacy and leadership competencies. The instruments selected for this study will be available on-line for 21 days for convenience of the participant and for ease of the researcher obtaining data in an anonymous format. Data will be collected and utilized on the first 30 volunteers (in each of the dual-enrollment categories) for a total of 60 participants in the sample. Students will NOT put their names on any form of the study. You have the right to inspect any materials prior to allowing your child to participate.

The consent (assent) to be a research participant will include the right of the student to voluntarily assent to or dissent from participation with no adverse consequences in the study along with the right to anonymity and confidentiality, and to no coercion. Since this invitation to participate in the study is strictly voluntary; there will be no adverse effects or consequences on you or your child should you decline to allow your child to participate or should your child choose to drop out at any time during the study.

Student participants who voluntarily consent (assent) to the study will access SurveyMonkeyTM remotely, so confidentiality is furthered assured. Therefore, the study has been designed to ensure that the student's identity is protected from the researcher with the results of the surveys anonymously released to the researcher via SurveyMonkeyTM. SurveyMonkeyTM will be asked

by the researcher to "disable the SSL" before data collection. This action assures the fact that the results received by the researcher will be truly anonymous. There will be no record kept of neither IP addresses nor linkages that could identify the student.

Your child's participation or non-participation in this study will not affect his or her education. I do not know if your child will get any direct benefits from taking part in this study. Although there are no potential benefits to your child, your child's participation in this study may help to understand information regarding the comparison of two categories of dual-enrolled student on self-efficacy and leadership practices. There are no risks in participating in this study.

Further, as a research participant, the information that your child provides will be held in confidence to the extent permitted by law. Any published results of the research will refer to group averages only, and no names will be used in the study. Data will be kept in a locked file in the researcher's office. All data will be destroyed after five years by the researcher. The third-party volunteers assisting with this study will keep all Parental Consent Forms for five years, then destroying them as determined by law. Your signed consent will be kept separate from the data.

If you have any questions or concerns regarding the study or your child's participation in the study, you may contact me, Neoka Marple Apple, at (727) 381-0415 or (727) 698-1923 or my advisor, Dr. Edward Bernstein at (305) 899-3861 or the Institutional Review Board point of contact, Mrs. Barbara Cook, at (305) 899-3020. If you are satisfied with the information provided and are willing to allow participation in this research, please sign your consent by signing this consent form.

Voluntary Consent

Non-participation requires no response.

I acknowledge that I have been informed of the nature and purposes of this experiment by Neoka Marple Apple and that I have read and understand the information presented above, and that I have received a copy of this form for my record.

I give my voluntary consent to allow my child to participate in this experiment.

APPENDIX B

PARENTAL INFORMED CONSENT FORM



PARENTAL INFORMED CONSENT

Information for parents who are being asked to allow their child to take part in research

Starla Metz, Principal of St. Petersburg Collegiate High School, and Pinellas County Schools are concerned that as a parent you are aware of a request (for your child's participation in this study) and you have either given your permission or declined your child's involvement.

Title of study: A Comparison Between Two Categories of Dual-enrolled Students on Self-efficacy and Leadership Practices

Person in charge of study and contact number: Neoka Marple Apple, PhD Candidate, Barry University Adrian Dominican School of Education, Miami, Florida, at (727) 318-0415, (727) 698-1923; or Dr. Behrokh Ahmadi, Director of Program Evaluation for the Pinellas County School Board, at (727) 588-6253

Study staff who can act on behalf of the person in charge: Starla Metz, Principal, at (727) 341-4610

Where the study will be done: Survey will be conducted virtually through an on-line survey housed on SurveyMonkeyTM.

Should your child take part in this study?

This form tells you about the study. You can decide if you want your child to take part in it or not. Your response to this form tells us your desires.

Before you decide:

Read this form and any other information that you are given about the study.

You may ask questions of the individual who is asking for your child to participate (the researcher). Their name and number are at the top of this page. Talking to them does not indicate your agreement for your child to participate. DO NOT sign this form to indicate your consent until all of your questions are answered to your satisfaction.

All research projects conducted in Pinellas County Schools are reviewed by district level personnel and by the principal of your child's school. This is to ensure your child's safety; it does not mean that you should or should not allow your child to participate – that is your decision.

You can ask questions:

You may have questions that this form does not answer. If you do, ask the person in charge of the study or the study staff. Remember, that this is not always the school personnel. The person you should address your questions to is at the top of this form.

You don't have to guess about things that you don't understand or that are not clear. Ask the people doing the study to explain things in a way you can understand.

You should only agree to let your child take part in this study if both you and your child agree to participation.

After you read this form:

If you choose to allow your child to participate, then indicate your consent and sign the attached form. If you do not want your child to take part in this study, that is fine. Just indicate your decision and sign the attached form.

"Why is this research being done?" and "Why my child?"

The purpose of this study will be to compare two categories of dual-enrolled students on self-efficacy and leadership practices. The intent, then, will be to determine if the category mode, homeschool or public school, has an effect on self-efficacy and leadership practices on the dual-enrolled student. Being an 11th or 12th grade dual-enrolled students of the collegiate high school program qualifies the student to participant in this study.

What information is being collected?

The following information will be collected from each participant: If you decide to allow your child to voluntary participate in this research, you will submit your child's e-mail address on this form in order that s/he will be asked to complete two web-based surveys of 10 and 30 Likert-style statements housed on SurveyMonkeyTM, which should take no more than a total of 10-15 minutes. The content of these surveys addresses the subjects of self-efficacy and leadership practices with its purpose to measure a general overall sense of perceived self-efficacy and leadership competencies. Students will NOT put their names on any form of the study. You have the right to inspect any materials prior to allowing your child to participate.

The study has been designed to protect your student's privacy. Explain how!

The study has been designed to ensure that the student's identity is protected from the researcher with the results of the surveys anonymously released to the researcher via SurveyMonkeyTM. Thus, the secured website is accessed remotely, so designed, to prevent the researcher's ability to connect responses to participants; thus confidentiality is furthered assured. In addition, SurveyMonkeyTM will be asked by the researcher to "disable the SSL" before data collection thereby, assuring the fact that the results received by the researcher will be truly anonymous and there will be no record kept of neither IP addresses nor linkages that could identity the student.

What are the potential benefits to your child if they take part in this study?

Your child's participation or non-participation in this study will not affect their education or the relationship with their teacher or other school district personnel.

We do not know if your child will get any direct benefits from taking part in this study. Although there are no potential benefits to your child, your child's participation in this study may help our understanding in the comparison of two categories of dual-enrolled student in self-efficacy and leadership practices.

What are the risks if your child takes part in this study?

There are no known risks to your child's involvement in this study.

What will be done to keep your child's study records from being seen by others?

This study is confidential and anonymous; your child will not be identifiable by his/her response. A third- party volunteer will keep all Parental Consent Forms for five years then be destroyed as determined by law. All data will be destroyed by the researcher in five years as determined by law. Since data results from the surveys are secured remotely via SurveyMonkeyTM, the researcher's ability to connect responses to participants is not possible, thus confidentiality and anonymity is furthered assured. In addition, SurveyMonkeyTM will be asked by the researcher to "disable the SSL" before data collection thereby, assuring the fact that the results received by the researcher will be truly anonymous and there will be no record kept of neither IP addresses nor linkages that could identify the student. This meets the criterion that federal law requires your child's study records to be kept private. Whereas the Pinellas County Schools may allow certain people such as the study staff, The United States Department of Health and

Human Services (DHHS), and the Pinellas County Schools personnel by law to see your child's study records, anyone of these people who looks at your child's records must keep them confidential. However, there is no way to connect data results with student's names due to the secure format of SurveyMonkeyTM.

What if you let your child join the study and then later decide you want to stop?

You are free to change your mind at any time. If you decide that you do not want your child to participate in the study after signing this consent form, tell the study staff as soon as you can. There are no adverse affects to not participating or stopping anytime during the study. Your child may exit anytime without adverse consequences.

If you have any questions about this study, call Neoka Apple at (727) 69-1923 or (727) 381-0415. If you have general questions about research being done in Pinellas County, contact Dr. Behrokh Ahmadi, The Research & Accountability office, at 727-588-6253.

•		•
Consent for C	Child/Student to Take Part in this Re	esearch Study
It's up to you. You can decide if	you want your child to take part in this	study.
Printed Name of Child/Student		
Please choose one of the options:		
I Participation		
I freely give my consent to let m purposes. I have received a cop	y child take part in this study. I und y of this consent form.	derstand that this is for research
Signature of Parent/Guardian of child taking part in study	Printed Name of Parent	Date
IN ORDER TO PARTICIPATE IN S E-MAIL ADDRESS:	RESS OF YOUR CHILD SO THAT S/HE AID STUDY.	
•		*
II Non Participation		
I do not want my child to take p I DO NOT give my consent to le	art in this study. t my child take part in this study.	
Signature of Parent/Guardian	Printed Name of Parent of child taking part in study	Date

APPENDIX C E-MAIL REQUEST

Dear Student:

My name is Neoka Marple Apple, and I am a doctoral candidate enrolled in the Barry University Adrian Dominican School of Education, Separtment of Educational Leadership and Higher Education Administration, Miami, Florida.

Your parent has given permission for you to participate in a research study titled *A Comparison Between Two Categories of Dual-enrolled Students on Self-efficacy and Leadership Practices*. Because you are a dual-enrolled student, you are invited to participate in a study aimed at comparing two categories of enrollment on self-efficacy and leadership practices.

If you decide to voluntary participate in this research, you will be asked to complete two webbased surveys, housed on SurveyMonkeyTM, of 10 and 30 Likert-style statements, which should take no more than a total of 10-15 minutes. The content of these surveys addresses the subjects of self-efficacy and leadership practices with the purpose to measure a general overall sense of perceived self-efficacy and leadership competencies.

In this research, there are no anticipated risks or benefits to you as there is no effect of participation on you as a research participant. Although there are no benefits to you, your participation in this study may help to understand the comparison of two categories of dual-enrolled student on self-efficacy and leadership practices.

Participation in this study is strictly voluntary, and this invitation includes the right, as a student, to voluntarily assent to or dissent from participation in the study along with the right to anonymity and confidentiality, and to no coercion. Furthermore, there are no adverse consequences if you decide not to participate or to exit at any time during the study.

If you agree to voluntarily participate in this study, please click on the SurveyMonkeyTM link for more information and for the surveys. By clicking on this link, you have agreed to consent (assent) to participate in this most exciting study. Again, once you are on SurveyMonkeyTM you may exit any time without adverse consequences.

Thanking you in advance for your time,

Sincerely,

Neoka Marple Apple Ph.D. Candidate

APPENDIX D

COVER LETTER

Barry University Cover Letter

Dear Research Participant:

Your participation in a research project is requested. The title of the study is "A Comparison Between Two Categories of Dual-Enrolled Students on Self-efficacy and Leadership Practices". The research is being conducted by Neoka Marple Apple, a doctoral candidate enrolled in the Educational Leadership and Higher Education Administration Department at Barry University. This researcher is seeking information that will be useful in the field of educational leadership. The aim of the research is to compare two categories of dual-enrolled students on self-efficacy and leadership practices. In accordance with this aim, surveys called The General Self-Efficacy Inventory and Student Leadership Practices Inventory-Self, will be used and are found in the next link. Sixty participants are anticipated.

You have the right to voluntarily assent to or dissent from participation in the study. Should you decline to participate or should you choose to exit at any time during the study, there will be no adverse consequences. There will be no effect on your grades as a student.

Those students who decide to voluntarily participate in the online survey would acknowledge their voluntary consent (assent) to participate by entering and completing the surveys. You will be asked to answer statements given in the Likert-Scale format. These webbased surveys are estimated to take no more than 10-15 minutes to complete. There are no known risks for those student participants who voluntarily consent (assent) to participate in the study. Furthermore, there are no direct benefits to you for participating in this study; however, your participation will contribute to research in the area of Education and Leadership. Since participation in the study is strictly voluntary, the invitation will include the right of the student to refuse participation any time, without negative consequences. You can skip any questions you do not want to answer and you may exit anytime without adverse effects.

As a research participant, information you provide is anonymous and confidential, that is, no names or other identifiers will be collected on any of the instruments used, except for the category of dual enrollment. Data will be kept in a locked file in the researcher's office and destroyed after five years. SurveyMonkey.com allows researchers to suppress the delivery of IP addresses during the downloading of data, and in this study, no IP address will be delivered to the researcher. In addition, I, as the researcher, will request that SurveyMonkeyTM "disable the SSL" before data collection thereby assuring the fact that the results I will receive will be truly anonymous, and there will be no record kept of your IP address nor linkages I could utilize to identify you. However, SurveyMonkey.com does collect IP addresses for its own purposes. If you have concerns about this, you should review the privacy policy of SurveyMonkey.com before you begin.

If you have any questions or concerns regarding the study or your participation in the study, you may contact me, Neoka Marple Apple, by phone at (727) 698-1923 or by e-mail at

swacdnkick@aol.com. You may also contact the Barry University Institutional Review Board point of contact, Barbara Cook, by phone at (305) 899-3020 or by e-mail at bcook@mail.barry.edu, or if a collegiate high school student, you may also contact Dr. Behrokh Ahmadi, Director of Program Evaluation for the Pinellas County School Board, at (727) 588-6253.

You may exit now without any adverse consequences. If you choose to voluntarily participate, please access the surveys by clicking on the following link. By entering, completing, and submitting the web-based survey template, you are acknowledging that you voluntarily agree to participate in the study with no coercion. Once on the survey link, you may exit anytime without adverse consequences.

Thank you for your participation.

Sincerely,

Neoka Marple Apple Ph.D. Candidate

APPENDIX E

GENERAL SELF-EFFICACY SCALE

(Jerusalem& Schwarzer, 1992)

Dear Research Participant,

Please follow the instructions for the following surveys. You may exit anytime without adverse consequences.

Please answer the following statements by indicating the degree to which you think the statements listed below describe you by selecting **one** of the following responses for each statement.

	1 = Not at all true	2 = Hardly True	3 = Moderately True	4 = Exactly True
1)	I can always manage	to solve my problem	as if I choose to do so.	1 2 3 4
2)	If there is interference I can still find ways to	0.0	als,	1 2 3 4
3)	I am motivated to rea	ch my aims and to a	ccomplish my goals.	1 2 3 4
4)	I am confident that I	can effectively mana	age unexpected events.	1 2 3 4
5)	My resourcefulness h	nelps me to handle un	nexpected situations.	1 2 3 4
6)	I am a problem solve	r.		1 2 3 4
7)	My self reliance allow	ws me to face difficu	alties with a can-do attitude.	1 2 3 4
8)	My problem solving	techniques lead me t	to finding solutions.	1 2 3 4
9)	When faced with diff	iculty, I can manage	it.	1 2 3 4
10)	I display a positive a	ttitude regardless of	my circumstances.	1 2 3 4

APPENDIX F

STUDENT LEADERSHIP PRACTICES INVENTORY—SELF

Instructions

On the next two pages are thirty statements describing various leadership behaviors. Please read each statement carefully. Then rate *yourself* in terms of *how frequently* you engage in the behavior described. *This is not a test* (there are no right or wrong answers). The usefulness of the feedback from this inventory will depend on how honest you are with yourself and how frequently you *actually* engage in each of these behaviors.

Consider each statement in the context of one student organization with which you are now (or have been most) involved with. This organization could be a club, team, chapter, group, unit, hall, program, project, and the like. As you respond to each statement, maintain a consistent perspective to your particular organization. The rating scale provides five choices. Select the number that best applies to each statement:

- (1) If you RARELY or SELDOM do what is described
- (2) If you do what is described ONCE IN A WHILE
- (3) If you SOMETIMES do what is described
- (4) If you OFTEN do what is described
- (5) If you VERY FREQUENTLY or ALMOST ALWAYS do what is described

In selecting the response, be realistic about the extent to which you *actually* engage in the behavior. Do *not* answer in terms of how you would like to see yourself or in terms of what you should be doing. Answer in terms of how you *typically* behave.

For example, the first statement is "I set a personal example of what I expect from other people". If you believe you do this *once in a while*, underline the number 2. If you believe you do this *often*, underline the number 4. Select and underline only one option (response number) for each statement.

Please respond to every statement. If you can't respond to a statement (or feel that it doesn't apply), underline a 1.

STUDENT LEADERSHIP PRACTICES INVENTORY—SELF

How frequently do you *typically* engage in the following behaviors and actions?

Select the number to the right of each statement, using the scale below, that best applies.

1 2 3 4 5

	1 2 3		4		5				
RAR	ELY OR SELDOM	ONCE IN A WHILE	SOMETIMES	VERY OF	TEN	FR	REQUEN	TLY	
1.	I set a personal people.	example of what I e	expect from other	1	2	3	4	5	
2.	I look ahead and will affect us in	d communicate about the future.	ut what I believe	1	2	3	4	5	
3.	I look around for skills and abiliti	or ways to develop a es.	and challenge my	1	2	3	4	5	
4.	-	tive rather than com	-	1	2	3	4	5	
5.	I praise people f	for a job well done.		1	2	3	4	5	
6.	our organization	d energy making sun adheres to the prin ve agreed upon.		1	2	3	4	5	
7.		ers in our organizatele of accomplishing		1	2	3	4	5	
8.	I look for ways methods.	that others can try o	out new ideas and	1	2	3	4	5	
9.	I actively listen	to diverse points of	view.	1	2	3	4	5	
10.	I encourage other programs in our	ers as they work on organization.	activities and	1	2	3	4	5	
11.	I follow through make in this org	on the promises arganization.	nd commitments l	[1	2	3	4	5	
12.		rs about sharing a viization could be in		h 1	2	3	4	5	
13.	I keep current of affect our organ	n events and activit ization.	ies that might	1	2	3	4	5	
14.	I treat others wi	th dignity and respe	ect.	1	2	3	4	5	
15.		our organization su their contributions		s 1	2	3	4	5	

RAR	1 ELY OR SELDOM	2 ONCE IN A WHILE	3 SOMETIMES	4 VERY OF	FTEN	FR	5 EQUEN	TLY	
16.		et feedback about h ple's performance.	ow my actions	1	2	3	4	5	
17.		s about how their o toward a common		be 1	2	3	4	5	
18.	_	not go as we expect om this experience?		1	2	3	4	5	
19.		cision that other peo ke on their own.	ople in our	1	2	3	4	5	
20.	-	t to publicly recognent to our values.	ize people who	1	2	3	4	5	
21.	I build consensu our organization	ıs on an agreed-upo ı.	on set of values for	or 1	2	3	4	5	
22.	-	positive when talk pires to accomplish.	•	ur 1	2	3	4	5	
23.	I make sure that for the projects	we set goals and m	nake specific plan	ns 1	2	3	4	5	
24.	I give others a g deciding how to	reat deal of freedor do their work.	m and choice in	1	2	3	4	5	
25.	I find ways for u	us to celebrate acco	mplishments.	1	2	3	4	5	
26.	I talk about the actions.	values and principle	es that guide my	1	2	3	4	5	
27.	I speak with cor meaning of wha	nviction about the hat we are doing.	igher purpose and	d 1	2	3	4	5	
28.	I take initiative do things in our	in experimenting w organization.	ith the way we ca	an 1	2	3	4	5	
29.	I provide opport leadership respo	tunities for others to onsibilities.	take on	1	2	3	4	5	
30.		people in our organized for their cont		1	2	3	4	5	

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