

---

Electronic Theses and Dissertations, 2004-2019

---

2013

## The Relationship Of Participation In A Summer Transition Program For At-risk Ninth Grade Students And Their Performance In Algebra I

Jose Sanchez  
*University of Central Florida*



Part of the [Educational Leadership Commons](#)

Find similar works at: <https://stars.library.ucf.edu/etd>

University of Central Florida Libraries <http://library.ucf.edu>

This Doctoral Dissertation (Open Access) is brought to you for free and open access by STARS. It has been accepted for inclusion in Electronic Theses and Dissertations, 2004-2019 by an authorized administrator of STARS. For more information, please contact [STARS@ucf.edu](mailto:STARS@ucf.edu).

---

### STARS Citation

Sanchez, Jose, "The Relationship Of Participation In A Summer Transition Program For At-risk Ninth Grade Students And Their Performance In Algebra I" (2013). *Electronic Theses and Dissertations, 2004-2019*. 2847.

<https://stars.library.ucf.edu/etd/2847>



THE RELATIONSHIP OF PARTICIPATION IN A SUMMER TRANSITION PROGRAM  
FOR AT-RISK NINTH GRADE STUDENTS AND THEIR PERFORMANCE IN ALGEBRA I

by

JOSE A. SANCHEZ

B. S. City College of New York, 1980

M. B. A. University of Central Florida, 1996

Ed. S. Stetson University, 2007

A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Education  
in the School of Teaching, Learning and Leadership  
in the College of Education  
at the University of Central Florida  
Orlando, Florida

Summer Term  
2013

Major Professors: Rosemarye Taylor and Debbie Hahs-Vaughn

© 2013 Jose A. Sanchez

## **ABSTRACT**

This study examined the Summer Transition Program in a large suburban school district. One of the common concerns of education leaders is the number of students who choose to dropout of high school. The eighth to ninth grade Summer Transition Program has been implemented to address the high school dropout issue and was the focus of this study. The researcher examined if participation in the Summer Transition Program could be predicted by student subgroup, to what extent, if any, participation in the Summer Transition Program had on the academic success in Algebra I, and if there is a relationship with academic success in Algebra I and at-risk factors.

## ACKNOWLEDGMENTS

I would like to thank my committee of esteemed educational leaders; without them, this work could not have been accomplished:

- Dr. Rosemarye Taylor, co-chairperson of the committee, who assisted with the workings and completion of this project. She provided the foundation for this research, and without her, I could not have gotten started or finished. Thank you for holding us to the highest standard.
- Dr. Debbie Hahs-Vaughn, co-chairperson of the committee, who provided the statistical insight needed to complete the analysis for this study and offered her knowledge and guidance at achieving this goal. Thank you so much for your support.
- Dr. Walter Doherty, who offered his wisdom and guidance at achieving this goal. Thank you so much for your support.
- Dr. Lee Baldwin, Thank you for your leadership, team belief and assistance through this dissertation process.

Cohort1 of the University of Central Florida Executive Ed.D program class of 2013, who truly showed that collaboration, is a tool that helps to improve us all. The Seminole County Public Schools Cohort 1 members who supported one another on this journey. Thank you all so much.

Thank you to my family and friends, who supported me along the way. Because of their love and support I was able to finish this doctoral degree and dissertation. I love you all, with all of my heart. To my wife and best friend, Edna, who provided me with needed support and encouragement. My mother Hilda, son Paul, daughter Denise, Grandson Xavier, Granddaughter

Leona, Daughter-in-Law Karina, and Son-in-Law Fred who helped me with this journey with their understanding of the family balance needed to complete this adventure. Finally, to my dad (Pop), who I lost three years ago and I know this would make him very proud. I wish you were here to share my joy in this accomplishment, but I know that in some way you are watching.

## TABLE OF CONTENTS

LIST OF TABLES .....	ix
CHAPTER 1: INTRODUCTION.....	1
Conceptual Framework .....	3
Statement of the Problem .....	4
Purpose of the Study .....	5
Research Questions .....	5
Definitions .....	8
Methodology .....	12
Population.....	12
Instrumentation.....	13
Intervention.....	14
Data Collection Procedures .....	14
Data Analysis.....	15
Procedures .....	15
Significance of the Study .....	15
Limitations .....	16
Delimitations .....	17
Summary .....	17
CHAPTER 2: REVIEW OF THE LITERATURE.....	19
Introduction.....	19
The High School Dropout Problem.....	20
National .....	20
State .....	22
Local .....	22
The Price of Dropping out of High School .....	24
National .....	24
State .....	26
Middle School to High School Transition.....	27

Ninth Grade At-risk Factors .....	28
Adolescents.....	28
Social Change .....	33
Academic Challenge.....	34
At-risk Characteristics .....	35
Transition Programs .....	38
Transition Program Productive Components .....	39
The Boomerang Project .....	41
Ninth-Grade Academies .....	42
Talent Development Model .....	42
Advancement via Individual Determination (AVID).....	44
Mentoring.....	46
Benefits of Mentoring.....	46
Mentoring Relationships.....	48
Attachment.....	50
Effects of Programs .....	52
Teacher Mentors .....	52
Summary .....	54
CHAPTER 3: METHODOLOGY .....	55
Introduction .....	55
Research Questions .....	55
Selection of Participants.....	57
Instrumentation.....	60
Intervention .....	61
Data Collection.....	63
Data Analysis .....	63
Summary .....	68
CHAPTER 4: ANALYSIS OF DATA .....	70
Introduction .....	70
Propensity Score Matching .....	70



Descriptive Statistics .....	72
Testing the Research Questions .....	76
Research Question One .....	76
Research Question Two.....	81
Research Question Three.....	85
Additional Analysis.....	90
Summary .....	95
CHAPTER 5: DISCUSSION.....	99
Introduction .....	99
Summary of Study.....	99
Discussion of Findings .....	101
Research Question One .....	101
Research Question Two.....	103
Research Question Three.....	104
Additional Analysis English Language Learners .....	105
Implications for Practice .....	106
Recommendations for Future Research .....	110
Conclusions .....	111
APPENDIX A SCHOOL DISTRICT IRB APPROVAL LETTER .....	114
APPENDIX B CITI COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE.....	116
APPENDIX C IRB OUTCOME LETTER.....	119
LIST OF REFERENCES .....	121

## LIST OF TABLES

Table 1	<i>Data Sources Used to Answer Research Questions</i> .....	7
Table 2	<i>Demographics for all Eligible Transition Students for 2009-2010</i> .....	59
Table 3	<i>Demographic Data for Propensity Analysis Selected Sample</i> .....	75
Table 4	<i>Summary of Hierarchical Regression Analysis for Demographics</i> .....	80
Table 5	<i>Descriptive Statistics for independent t-test, Algebra I Grades for Participants and Non-participants</i> .....	83
Table 6	<i>Frequency Distribution of Grades for Participant and Non-Participants Excluding Eligible for Promotion Participant and Non-Participant</i> .....	85
Table 7	<i>Summary of Hierarchical Regression Analysis for At-Risk Factors</i> .....	90
Table 8	<i>Demographics for all Eligible Quintile 5 ELL Transition Students for 2009-2010</i> .....	94

## **CHAPTER 1: INTRODUCTION**

Leaders in high schools throughout the United States are looking for ways to increase their overall graduation rates and in particular the graduation rate of those students who are identified as at-risk. Students entering the ninth grade are experiencing for the first time the requirement of earning passing grades in their core courses and this makes the ninth grade experience critical in determining the rate of success for these students (Fulk, 2003). A number of the most challenging courses that a student needs to complete in high school are also required for graduation (Smith, Akos, Lim & Wiley, 2008). Students coming from backgrounds of low-socioeconomic status, households containing a dropout parent, and students of Black, Hispanic, or Native American descent have a higher probability of not graduating from high school (Reschly & Christenson, 2006).

Educators throughout the United States know that not graduating from high school is not a new problem and non-graduates are impacted in a number of ways. Non-graduates experience higher unemployment, lower pay, increased need for assistance, and increased probability of incarceration. The United States Department of Labor's Bureau of Labor Statistics reported in October 2011 that high school graduates had an unemployment rate of 26.7% and non-graduates had an unemployment rate of 38.4% (Bureau of Labor Statistics, 2011). Students who do not complete high school usually find themselves in low end and low paying jobs with little or no career path. High school dropouts earned an average annual salary of \$17,299 while high school graduates earned an average annual salary of \$26,933 (U.S. Bureau of the Census, 2006). High school graduates increase their lifetime earning potential over non-high school graduates an average of \$260,000 (U.S. Bureau of the Census, 2006). This average increase in earnings

serves the public well by providing increased tax revenue and fewer users of governmental services (Levin, 2008). Non-graduates makeup 59% of America's federal prison inmates and 75% of America's state prison inmates (Harlow, 2003).

Studies have shown that students earning enough credits to enter the tenth grade and earning less than two failing grades in courses of academic focus are on track to finish high school with their cohort (Allensworth & Easton, 2005). Ninth grade students have higher rates for missing school, lower grade point averages, a large portion of the failing grades and more discipline referrals than the other high school grades (Fritzer & Herbst, 1996). A John Hopkins University study found that only 10-15% of repeating ninth graders, from school systems with the highest dropout rates where approximately 40% of ninth graders repeat the grade, go on to graduate (Kennelly & Monrad, 2007a).

In the 2008-2009 school year, the national Average Freshman Graduation Rate (AFGR) was 75.5% and the Florida high school graduation rate was 68.9% (National Center for Education Statistics, 2011). For the 2008-2009 school year the Florida student subgroups' graduation rates were 68.4% for American Indian/Alaska Native; 94.0% for Asian/Pacific Islander; 66.9% for Hispanic; 59.8% for Black and 71.1% for White. The first group of students to feel the effects of the increased graduation requirements is the incoming ninth graders and these middle school students moving from the eighth grade and entering the ninth grade notice that their academic requirements in high school are more rigorous (Fulk, 2003).

Students transitioning to the ninth grade from middle school will earn their high school diplomas in four or five years and some will not graduate (Miao & Wheelock, 2005). For the year 1991, the National percentage of students graduating in four or five years has fallen from 72% to 67 % in 2001(Miao & Wheelock, 2005). The inability of eighth graders to transition

smoothly into the ninth grade has resulted in some to dropout of high school before the start of the second year of their high school experience (Cooper & Liou, 2007). Along with more rigorous course work and additional homework, ninth graders face additional problems involving the social concerns (Akos & Galassi, 2004). Peer-led prevention programs that are focused on improving a teenager's individual and relational skills, level of school bonding, and social standards have the capability of easing a student's transition to ninth grade (Johnson Holt, Bry, & Powell, 2008).

### Conceptual Framework

This study is grounded in the conceptual framework that takes into account the relationships among the behavioral standards (punctuality, preparedness, attendance, respect, and communication), personal and environmental factors (health, nutrition and home environment), and social cognitive theory (behavior learned through exposure and positive/negative consequences). These concepts intervening in the academic environment of a student could affect their academic progression (Holt, Bry, & Johnson, 2008). Student engagement, learning and academic achievement are accounted for by social cognitive theory by a related interaction between personal, environmental and behavioral factors (Pajares, 1996, Zimmerman, 1989, Zimmerman & Schunk, 2001).

School based programs are administered in a school setting working with teachers, counselors and mentors from the student's school site (Greenberg, 2004). The effect of school based prevention programs rests on a number of variables which includes number of regular and mentoring sessions, content, degree of student to student and student to teacher interaction for the students participating in the program (Cuijpers, 2002). A meta-analysis of 120 school-based

negative behavior prevention programs found that interactive programs, those where students developed relationships with fellow students and teachers, had better results than non-interactive programs, those where students did not develop relationships between fellow students and teachers (Tobler & Stratton, 1997). School-based programs were able to improve their effectiveness by integrating across classroom programs, counselor programs addressing students experiencing negative external factors, and special services for students exhibiting behavioral problems (Greenberg, 2004). A number of students may benefit from the services of an all-around program, other students need a more focused program which targets their specific needs along with the all-around program to achieve the improvement of a student's well-being and counter the likelihood of negative behavior (Johnson, et al., 2008). This study examined the intervention that appears to mitigate the negative variables influencing at-risk students and aid in improving the academic performance of transition students.

#### Statement of the Problem

Educational leaders both at the district and high school levels share in their concern regarding the choice made by many students not to finish high school. The average freshman graduation rate reported by the National Center for Education Statistics (2011) for the 2008-2009 school year was 75.5% and this tells us that students transitioning from middle school to high school are failing in their ninth grade year of high school at a rate 24.5%. A major challenge that high school and district leaders face is how to increase the probability of students, transitioning from middle school to high school, meeting with academic success. The school district has implemented a Summer Transition Program for these students and this program is the focus of this study.

## Purpose of the Study

In this study three researchers, researcher 1, researcher 2(the author) and researcher 3 examined a teach forward preparedness Summer Transition Program administered in a large suburban school district. Educational leaders both at the district and high school levels share in their concern regarding the choice made by many students not to finish high school. Though there are many factors that influence a student's decision not to finish high school, the school district's leaders are searching for remedies for the controllable factors.

One of these potential solutions, the eighth to ninth grade Summer Transition Program, has been implemented to address the high school dropout issue and was the focus of this research study. In this Teach Forward preparedness program, the participants are provided with the opportunity to learn the early chapters of the mathematics, English and biology courses they will be taking during their ninth grade year. Researcher 1 examined student's perceptions of factors that have assisted in their staying on track towards graduation. Researcher 2(author) analyzed to what extent, if any, participation in the Summer Transition Program had on the academic success in Algebra I and if there is a relationship with participation in the Teach Forward preparedness program and the academic success by student subgroups. Algebra I was selected for this study because students in their ninth grade year who fail a core subject in the subject areas of English, science, mathematics or social studies are less likely to graduate from high school (Allensworth & Easton, 2005). Researcher 3 examined to what extent, if any, participation in the Summer Transition Program had on graduation rate.

## Research Questions

The study will be guided specifically by the following research questions:

1. What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status (SES), ethnicity [White, Black, Hispanic, Asian and other], English language learners [ELL], retention in grade, students with disabilities [SWD])
2. To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?
3. To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participant of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, are two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics)



Table 1

*Data Sources Used to Answer Research Questions*

Research Questions	Data Source	Study Variables	Data Analysis
1. What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian and other], English language learners[ELL], retention in grade, students with disabilities [SWD])	Transition program data set provided by the school district and Student Demographic, Exceptional Student Education, and English language learners formats during the 2009-10.	Dependent: Dichotomous Completed Yes/No Independent: Participating Student for Algebra I demographic subgroups for Summer Transition Program.	Descriptive Propensity Score Analysis Logistic Regression
2. To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?	Transition program data set provided by the school district and Student Academic grades for Algebra I for transition student program participants and transition student non- participants.	Dependent: Calculated GPA for Algebra I. Independent: Participation and Non-Participation Groups for Summer Transition Program.	Descriptive Propensity Score Analysis Independent <i>t</i> test
3. To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics).	Transition program data set provided by the school district and Student Demographic, student assigned to ninth grade, GPA less than 2.0, failed one or more academic courses, non-proficient in reading and mathematics, and retained two or more times from during the 2009-10.	Dependent: Calculated GPA for Algebra I. Independent: At-Risk factors for Summer Transition Program eligibility.	Descriptive Propensity Score Analysis Multiple Regression

## Definitions

The following definitions were used to explain the vocabulary in this study. The terms are defined in accordance with their significance and context within the study.

Achieve Grant - A \$358,000 grant earned by the school district to support the eighth to ninth grade Transition Program, funded by AT&T. Student transportation, curriculum development, mentoring support and instructional materials are the major tenants of the grant. The district in-kind contribution provides the teachers' salaries for the six-week summer program (AT&T Foundation, 2008, p.1).

Algebra I - This is a one credit course designed to provide the foundation for future secondary mathematics courses and develop skills needed to solve mathematical problems. Topics include, but are not limited to, functions, linear equations and inequalities, systems of linear equation and inequalities, polynomials, operations with radical expressions, solving quadratic equations, and ratio and proportions. Students in grades 9-12 can take this course. Algebra I or its equivalent is required for high school graduation (Seminole County Public Schools, n.d.).

At-Risk - Students who are not eligible for promotion from eighth to ninth grade because they did not earn a 2.0 GPA, failed one or more academic course, are non-proficient in reading and math (as evidenced by their eighth grade FCAT performance), and/or have been retained two or more times. The authors use the term promise students in order to avoid using the common, negative at-risk description (AT&T Foundation, 2008, p.2).

Biology - This course is designed to help students develop skills in the areas of cooperative learning, critical thinking, the scientific method, and the utilization of technology in

the research of contemporary problems and issues. The study of life processes will include measurement, cellular biology, genetics, ecology, animal and plant anatomy and physiology, as well as an introduction to the structure and function of the human body. Laboratory activities and safe laboratory techniques are an essential component of the course. Students in grades 9-12 can take this course (Seminole County Public Schools, n.d.).

Completion of the Summer Transition Program – Earning a passing grade/credit for the Summer Transition Program (Seminole County Public Schools, n.d.).

Course Grades - Individual student performance is reported as a letter grade. Each student receives a letter grade of A, B, C, D, or F. Each letter grade is defined numerically as a point-value range. An A is between 90-100 points, a B between 80-89, a C between 70-79, a D between 60-69, and a grade of F is equivalent to a point value range between 0 and 59 (Seminole County Public Schools, 2011, p.82-83).

Eligibility - Students who achieve or maintain Florida High School Athletic Association eligibility are given the opportunity to participate in sports and/or extracurricular activities during a specified semester (AT&T Project Narrative, 2008, p.1).

English I - This is a one credit course that provides instruction in the fundamentals of grammar, writing, vocabulary, and literature in a variety of genres. There is a focus on building critical reading skills as well as expository and persuasive writing. Students in grade 9 can take this course (Seminole County Public Schools, n.d.).

English Language Learners (ELL) – According to the federal government, an Limited English Proficient (LEP)/ELL is an individual: (A) who is aged 3 through 21; (B) who is enrolled or preparing to enroll in an elementary school or secondary school; (C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who

is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual's level of English language proficiency; or (iii) who is migratory, whose native language is a language other than English, and who comes from an environment where a language other than English is dominant; and (D) whose difficulties in speaking, reading, writing, or understanding the English language may be sufficient to deny the individual — (i) the ability to meet the State's proficient level of achievement on State assessments described in section 1111(b)(3); (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society(ED.gov, n.d.).

Ethnicity - a particular ethnic affiliation or group (Merriam-Webster.com, n.d.)

Florida Comprehensive Assessment Test (FCAT) – Is a series of tests given to Florida students in grades three to eleven and includes assessments in reading, mathematics, science and writing (Florida Department of Education, 2011a).

Grade Point Average - The Grade Point Average, or GPA, is the numeric average of a student's grades. A 2.50 GPA is the midpoint between a B (3.0) and a C (2.0). Course grades are given at the semester completion of each course (Seminole County Public Schools, 2011, p.82-83).

Graduation Cohort - Students entering their freshman year of high school for the first time, i.e. non-repeaters, are used to build the graduation cohort. Each cohort is tracked for four consecutive school years, with the expectation that students within the cohort will graduate at the end of the four years. Students graduating with their cohort and earning diplomas that Florida identifies as graduates are considered as on-time graduates (Florida Department of Education, 2011a, p. 17).

Multiracial – A person having parents of different racial or ethnic categories (Florida Department of Education, 2007).

Promise Students - The author defined use of promise students is at-risk students. As defined by the author, Promise students are learners who are not eligible for promotion from eighth to ninth grade because they did not earn a 2.0 GPA, failed one or more academic course, are non-proficient in reading and math (as evidenced by their eighth grade FCAT performance), and/or have been retained two or more times.

Scholarship - A twelve credit scholarship for state college is granted to participants in the Transition Program upon graduation if they earn a cumulative 2.50 GPA (AT&T Project Narrative, 2008, p.9).

Socioeconomic Status (SES) - is the combined measure of an individual's or family's economic and social position relative to others, based on income, education, and occupation analyzing a family's SES, the mother's and father's education and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed. Socioeconomic status is typically broken into three categories, high SES, middle SES, and low SES to describe the three areas a family or an individual may fall into. When placing a family or individual into one of these categories, all variables are assessed. (Reference.com, n.d.)

Students with Disabilities – According to the Florida Department of Education students with disabilities who need specially designed instruction and related services (fldoe.org, 2011).

Summer Transition Program - The Transition Program is an academic Teach Forward model. The students begin work in their ninth grade English, algebra and science classes. Study skills, high school writing and reading skills, as well as an affective component, are part of the program. An effort is made to schedule the students with at least one Transition Program teacher

for the following school year. In addition, the students are assigned a mentor and their academics and attendance are closely monitored (AT&T Project Narrative, 2008, p.1-2).

Teach Forward - Students are taught the first few chapters of the core courses of Algebra I, Biology and English I prior to the beginning the school year and actually taking the courses. (AT&T Project Narrative, 2008, p.1).

Two or more Years Overage – The author defined at-risk category in place of retained two or more times. If the transitioning student has attained the age of sixteen by August 1, 2009 they are put into this category.

## Methodology

This study utilized a quasi-experiment design that employed propensity score analysis to match at-risk students who completed the Summer Transition Program to at-risk students who did not complete the Summer Transition Program to determine if there is a relationship between student academic achievement in Algebra I and participation in a district Summer Transition Program before entering the ninth grade. Student data are maintained by the school district to meet all state reporting requirements and the requirements of the grant-funded Summer Transition Program. All Educational Rights and Privacy Act (FERPA) laws were followed to ensure the privacy of all student data.

### *Population*

All eighth grade students in the school district who did not earn promotion status or were not on a path towards graduation, had a high rate of absenteeism (less than 85% attendance), had been retained at previous grade levels (had been retained two or more times in kindergarten through eighth grade), were academically unsuccessful (GPA 2.0 or below), had poor

standardized test scores (Level 1 or 2 in Florida Comprehensive Assessment Test [FCAT] Mathematics and Reading), exhibited lack of school engagement (zero or very limited extracurricular participation), were the targeted students for the transition program. A student having any one of these characteristics was eligible to participate in the Summer Transition Program (AT&T Project Narrative, 2008, p. 3).

Students eligible to participate in the Summer Transition Program at the end of their eighth grade school year were used for this study. This population comprised both the participant and non-participant groups. The study groups were made up of students who were eligible and self-selected to participate in the Summer Transition Program at the end of their eighth grade school year, and students who were eligible and did not self-select to participate in the Summer Transition Program at the end of their eighth grade school year. Participant and non-participant group academic data was obtained with the help of the district's Information.

There were a total of 942 students eligible to participate in the Summer Transition Program. Of this group, 433 participated in the Summer Transition Program and 509 were non-participants. The participant and non-participant groups includes students who entered the ninth grade during the 2009-2010 school year.

### *Instrumentation*

In order to accurately calculate academic progress for both at-risk groups, current procedures used in Florida for building a four-year graduation cohort were modeled. The initial cohort was defined by students entering the ninth grade for the first time; in other words, ninth grade repeaters were excluded from the cohort. Once the cohort was built, students were appropriately coded at the end of each school year in order to define their status as continuing in

the cohort, removed from the cohort due to leaving the school district, or dropout. Algebra I academic progress was measured as the mean letter grades earned in Algebra I during semester 1 and semester 2 of the participant's and non-participant's ninth grade year (2009-2010).

### *Intervention*

The students taking part in the Summer Transition Program started work in their ninth grade Algebra I, English I and Biology subject areas. The beginning textbook chapters for each content area were taught during the summer and the goal was to expose the students to the early mandatory assigned readings and to add the necessary vocabulary to their academic language. The teachers working with the Summer Transition Program students were selected with the idea in mind to have each of the transition students scheduled with at least one of the teachers they had during the Summer Transition Program during their ninth grade year. Transition students were also matched up with a student mentor and if possible an adult mentor who is on staff at the student's school. Adult mentors monitor their mentee's attendance, grades and behavior throughout the transition student's high school career. The summer of 2011 was projected to have 400 transition students bringing the total number of transition students to date to 1,400.

### *Data Collection Procedures*

Data obtained for this study came from two sources as follows:

- (1) Data provided to the Florida Department of Education.
- (2) Data compiled and provided as part of the reporting requirements for the Summer Transition Program grant.

The data provided to the Florida Department of Education contains data for all students in the school district transitioning from middle school to high school for the 2009-2010 school year.



The needed grades and demographics for the participant and non-participant groups for the 2009-2010 school year are contained in these data. The grant required data provided information necessary to match participants of the Summer Transition Program to data provided to the Florida Department of Education.

### *Data Analysis*

The student data was analyzed using GPAs earned in Algebra I during the 2009-2010 school year. Sub-groups that were analyzed included gender, race, ethnicity, students with disabilities (SWD), English language learners (ELL), socioeconomic status, and retention in grade. The data was analyzed using descriptive, multiple regressions and propensity score analysis. Statistical analysis was also performed for the at-risk subgroups and participants and non-participants subgroups of the Summer School Transition Program. A multiple regression analysis to test the correlation and significance between the predictors (participant and non-participant) and the criterion variable (calculated GPA for Algebra I) was performed.

### *Procedures*

Approval was required from the dissertation committee, and The University of Central Florida's Internal Review Board (IRB). After obtaining approval from all groups, the proposal was presented to the school district designee for authorization to conduct the study. The author submitted a written request to the school district for authorization to use student data to conduct the research. All information which can identify students was removed before it was used in this study.

### *Significance of the Study*

This study adds to the body of knowledge regarding the relationship of a Summer

Transition Program on the academic success of at-risk students. The findings will be helpful to the school district interested in determining the success of the Summer Transition Program and in identifying areas for potential focus and improvement. By examining the academic success in core courses, the district will be more knowledgeable with targeted actions that may increase academic improvement for program participants, thereby improving the program participant's opportunity to graduate. The academic data for program participants and non-participants, in their core courses were analyzed to ascertain the level of effectiveness of the Summer Transition Program. The results of this study will enable the district to identify areas of strength and areas for potential growth in the Summer Transition Program.

The information obtained through this study will be useful to other school districts operating or intending to operate Summer Transition Programs. This study will provide other school districts with information regarding the factors that are productive and non-productive in providing a Summer Transition Program within their school district. The results of the study will help other school districts in the planning and improvement of their own Summer Transition Programs.

#### Limitations

1. The validity of the study depended on the system accuracy in providing the academic core courses grade results. The problem that arises here is that the study results may be skewed as a result of inaccurate data and this would result in inaccurate conclusions.
2. Attrition is not accounted for and may affect participant and non-participant group population size.
3. The participant and non-participant groups were drawn from public high schools within

one suburban school district and the generalizability of the study findings may be limited specifically to school districts that share characteristics with the school district examined.

4. It was assumed that the participant data was accurate and realistically represented the academic progress of participants and non-participants.

#### Delimitations

The study was delimited to all eighth grade students in the school district who met at least one of the following criteria:

1. Not eligible for promotion from eighth to ninth grade because they did not earn a 2.0 GPA.
2. Failed one or more academic course.
3. Had poor standardized test scores (Level 1 or 2 in Florida Comprehensive Assessment Test [FCAT] Mathematics or Reading).
4. Are two or more years overage.
5. For research question two, the following delimitation was made: because not all students in the school district dataset set had Algebra I grades for semester one and two, only students that had a complete set of demographics and an Algebra I grade in both semesters one and two were used in the analysis of Algebra I grade.

#### Summary

The intention of this study was to determine to what extent, if any, the Summer Transition Program had on positively affecting the academic achievement of our most at-risk students and to identify methods to increase the Summer Transition Program's effectiveness by studying effective research based at-risk programs throughout the United States. The district

leaders of the school district have targeted, as an instructional focus, their Summer Transition Program. A commitment has been made by the school district to provide continued funding of the Summer Transition Program upon completion of the AT&T Achieve Grant and has requested that the Summer Transition Program model be used to create a summer program for students transitioning for fifth to sixth grade. District leaders have had discussions with the Instructional Team, in an effort to design a process to identify at-risk students as early as the elementary and middle school grades and have the needed support services in place for the identified at-risk students. The school district is developing options to grade retention and at the elementary, middle and high schools is increasing the number and level of quality of mentors. The results of this study will be used to improve the art of teaching, methods used to identify and monitor the at-risk students throughout their elementary and secondary school years.

## **CHAPTER 2: REVIEW OF THE LITERATURE**

### **Introduction**

The challenge of at-risk students transitioning to the ninth grade from middle school and failing core academic classes resulting in these students not completing high school is well known. The transition to high school from middle school for at-risk students can be a daunting experience for these students as they try to navigate their new environment with little to no knowledge of what they will encounter. Ninth grade is an important grade for transition students. If the ninth grade is successful for these students, they increase their probability of being successful during their tenth, eleventh and twelfth grade years leading them to graduation (Allensworth & Easton, 2005).

The review of the literature was completed by gathering the information from research databases accessed through the University of Central Florida Libraries. The sources of information included, Academic Search Primer, ERIC, Dissertations and Theses. The information for this study was located by searching the databases for the following topics: (1) transition programs, (2) summer school, (3) grade 9 transition, (4) high school graduation, (5) mentoring, (6) dropouts, and (7) academic success. What follows is a brief literature review that discusses the topic surrounding the at-risk student's educational environment when they transition from the eighth to the ninth grade. Published research examining the high school dropout problem, the price of dropping out of high school, middle school to high school transition, ninth grade at-risk factors, transition programs, transition programs productive components, and mentoring with respect to at-risk students was reviewed.

## The High School Dropout Problem

### *National*

The seriousness of the high school dropout problem and its economic impact to the national, state and local economies is doubted by few. Individuals who do not obtain their high school diploma weaken their ability to compete in global marketplace. In 2011, unemployment rate for high school graduates was 26.7% and for those who did not complete high school 38.4% (Bureau of Labor Statistics, 2011). High school students drop out of school at a rate of 2 per minute; daily close to 7,000 students make the decision not to finish high school. The National Center for Education Statistics (2006) states that 25% of students in public high school complete their high school diploma in four years. For a majority of minority and low socioeconomic students, graduating from high school has a probability of 50 % (Herlihy & Quint, 2006; Swanson, 2004). National rates for not finishing high school are 30% for all students, 50% for Black and Hispanic students. Those students coming from low income families have a probability of dropping out of high school that is six times that of students coming from high income families (America's Promise Alliance, n.d.).

This is a high school epidemic, one that threatens our ability to keep pace with an increasingly demanding and globally competitive economy; it is costing our nation billions of dollars each year, and is diminishing the productivity and happiness of our young people. We can and we must do better. (Balfanz, Horning-Fox, Bridgeland, & McNaught, 2009, p. 5)

The rate at which high school students have been dropping out of school has stayed virtually the same for the past three decades and accounts for 500,000 high school students

dropping out each year (Heckman & LaFontaine, 2007; Warren & Halpern-Manners, 2007). The percentage of students who finish high school in 4 years or less is less than 60% (Amos, 2008) and male students, who are Black, Hispanic; English language learners; students with disabilities; or come from low income families graduate at an even lower percentage rate (Amos, 2008; KewalRamani, Gilbertson, Fox & Provasnik, 2007; Orfield, Losen, Wald & Swanson, 2004). The dropout problem is a widespread problem, and it has a greater effect on those students coming from single parent households or households comprised of parents who did not finish high school. In reviewing the previous 35 years, the graduation rate for minorities is not converging on the graduation rate for whites (Heckman & LaFontaine, 2010). Female students are not immune to the dropout problem and this is evident when 25% of female students eventually dropout of high school (Balfanz et al., 2009). Forty percent of an average freshman cohort will become high school dropouts by the time they reach their fourth year of high school and these students attend just fewer than 2,000 high schools throughout the United States (Balfanz et al., 2009).

The National Center for Education Statistics (2011) defines the Average Freshman Graduation Rate (AFGR), Dropout and Dropout Rate as follows:

The AFGR estimates the percentage of public high school students that receive a regular diploma within 4 years of their entry into 9th grade. Students that receive an alternative high school credential (i.e., a certificate of attendance or a high school equivalency degree) and those that take more than 4 years to complete high school are not considered on-time completers or dropouts. (p. 23)

Dropout: Is an individual who was enrolled in school at some time during the previous school year; was not enrolled at the beginning of the current school year; has not

graduated from high school or completed a state- or district-approved education program; and does not meet any of the following exclusionary conditions: transfer to another public school district, private school, or state- or district-approved education program; temporary absence due to suspension or school-approved illness; or death. (p. 25)

Dropout Rate: The proportion of students who drop out in a single year. The rate is the number of students who drop out of a given grade divided by the number of students enrolled in that grade at the beginning of that school year. (p. 2)

### *State*

The Florida high school graduation rate was 68.9% and the national Average Freshman Graduation Rate (AFGR) was 75.5% for the 2008-2009 school year. Florida's student subgroups' graduation rates, reported for the 2008-2009 school year, were 71.1% for White, 59.8% for Black, 66.9% for Hispanic, 94.0% for Asian/Pacific and 68.4% for American Indian/Alaska Native (National Center for Education Statistics, 2011). The National Governors Association (NGA) graduation rate for the 2010-2011 school year was 80.1% and Florida's actual graduation rate was 81.2% (greater due to inclusion of General Education Diplomas). The NGA graduation rate for the 2010-2011 school year for the school district was 93.3% and the actual school district graduation rate was 93.4% (Florida Department of Education, 2011b). When graduation rates are reviewed by race for the 2010-2011 school year, the NGA graduation rates were 96.2% for Whites, 83.6% for Black, 88.4% for Hispanic, 94.7% for Asian/Pacific and 100% for American Indian/Alaska Native.

### *Local*

Florida's NGA graduation rate would appear to indicate that 19.9% of Florida's 2010-



2011 cohort became dropouts. A cohort group is divided into three groups: graduates; non-graduates and dropouts. The non-graduate group includes students who have been retained and are still attending school and those students who have earned a certificate of completion.

Certificate of Completion is awarded to students who have completed the minimum number of credits and all other requirements prescribed by the local school board but failed to earn passing scores on the state approved graduation test or an alternate assessment or to achieve a cumulative grade point average of 2.0 on a 4.0 scale. (Florida Department of Education, 2012, p. 2)

For Florida's 2010-2011 NGA graduation rate cohort, dropouts accounted for 5.5% of that cohort group (Florida Department of Education, 2011b).

This school district graduation rates by race were 96.3% for White, 83.6% for Black, 88.7% for Hispanic, 95.2% for Asian/Pacific, and 100% for American Indian/Alaska Native. The school district freshman cohort for 2009-2010 had an adjusted count of 5,610 students and the percentages for the graduate, dropout and non-completer (alternative high school credential) groups were 93.3%, 1.2% and 5.6% respectively. The dropout rates by race for the school district were 0.2% for Whites, 1.2% for Black, 0.5% for Hispanic, 0% for both the Asian/Pacific and American Indian/Alaska Native groups (Florida Department of Education, 2011b). The dropout rates by race for the school district indicates that the dropout rate for Black students is six times the dropout rate for Whites and the dropout rate for Hispanics is two and one-half times the dropout rate for Whites.

Students transitioning to high school who earn the required credits for promotion to the tenth grade and have not failed more than one core academic class are on the trajectory to finish high school and graduate (Allensworth & Easton, 2005). When looking at who has lower grade

point averages, more often misses school, has a greater number of discipline referrals and has a greater share of failing grades; it is ninth grade students (Fritzer & Herber, 1996).

### The Price of Dropping out of High School

#### *National*

When students make the decision to join the group of high school dropouts they have made a decision which may dramatically affect their lives. Levin, Belfield, Muennig, and Rouse, (2007) stated that “An individual’s educational attainment is one of the most important determinants of their life chances in terms of employment, income, health status, housing and many other amenities” (p. 2). As a group, high school dropouts are faced with increased unemployment, health issues involving themselves and family members, greater need for public support, greater chance of being jailed, no or lower level of exercising their citizen rights, and emotional challenges (Balfanz et al., 2009). Students who dropout are confronted with higher levels of unemployment, lower salaries for all their years of employment and increased reliance on public assistance (Zvoch, 2006).

There is a relationship between the level of education a student achieves and the labor environment, employment rate, poverty, health and crime. High School students who dropout experience a strong negative effect to these elements (Centre for the Study of Living Standards, 2007). High School dropouts had experienced a rate of unemployment of 38.4% while high school graduates experienced a rate of unemployment of 26.7% (The United States Department of Labor’s Bureau of Labor Statistics, 2011). Dropouts who are 25 years of age and older are exposed to a variety of social, labor, and earnings complications that worsen their capability of moving into careers and successful marriages (Sum, Khatiwada, McLaughlin, & Palma, 2009).

High school dropouts are more likely to find themselves in jobs that are low end and low paying with little chance, if any, for advancement. Students who do not succeed academically and decide to drop out of high school will, for a lifetime, face many challenges of a social and vocational nature (Montgomery & Hirth, 2011).

The U.S. Bureau of the Census (2006) reports that high school dropouts earn an average of \$9,634 less annually with an average annual salary of \$17, 299 when compared to the average annual salary of \$26,933 for high school graduates. High school dropouts over their lifetime earn an average of \$260,000 less than the lifetime earnings of a high school graduate (U.S. Bureau of the Census, 2006). The increased earning potential for high school graduates results in increased tax revenue and a reduced demand for governmental services such as food stamps, housing subsidies, Medicaid, and Earned Income Tax Credits (Levin, 2008). The government would benefit by reducing the number of high school dropouts by 50% to the tune of \$45 billion in increased revenue and savings (Levin, et al., 2007).

When job markets are weak the high school dropout employment experience is even more negative. In 2008, 54% of high school graduates were unemployed while high school graduates experienced an unemployment rate of 32%, high school graduates with one to three years of postsecondary education experienced an unemployment rate of 21%, and those high school graduates who earned a four year degree experienced an unemployment rate of 15% (Sum et al., 2009). Harlow (2003) stated that high school dropouts makeup 59% of the inmates in federal prison and 75% of the inmates in state prisons. For each year for the next ten years, the dropout rate will cost the United States \$300 billion per year for an estimated total cost of \$3 trillion (Balfanz et al., 2009). In 2004, 1.3 million students dropped out of high school. The cost to the United States over the lifetime of these dropouts in reduced tax revenue, wage loss and

production will total \$325 billion over the lifetimes of these dropouts (Alliance for Excellent Education, 2006).

### *State*

The state of Florida is not immune to the problems associated with high school dropouts. The costs to the students who dropout of high school and to the community in which they live is shared with us by the following statement made by the Alliance for Excellent Education (2009):

There is a well-documented earnings gap between high school graduates and dropouts an annual difference of nearly \$10,000. There is also a growing challenge for individuals with only a high school diploma to find stable, well-paying jobs. The costs of dropping out are born not just by individuals, but by the communities in which they live, and the rest of society. The potential economic benefit of improving students' academic outcomes should be a wake-up call to the importance of reforming America's high schools. Dropouts from the class of 2008 will cost Florida almost \$25.3 billion in lost wages over their lifetimes. (p. 1)

As reported by Weber (2007), the following are savings that Florida could experience if Florida students were to stay in school and graduate from high school:

Florida could save \$1.5 billion in lifelong health care costs for each year's dropouts. Families would have almost \$4.5 billion more accumulated wealth if all heads of households graduated from high school. Almost \$15 billion would be added to Florida's economy by 2020 if black students and other minorities graduated at the same rate as whites.

The state could save almost \$194 million a year in community college costs and lost

earnings if kids graduated ready for college and did not need further remediation.

Reduced crime would result in a \$506 million annual savings to the state's economy if just 5 percent more males graduated. (p. 1)

### Middle School to High School Transition

A new school year often gets student's thoughts onto the challenges they will be facing in the coming school year. If the new school year is also a middle school to high school transition year, the student experiences high levels of nervousness and fear (Hertzog & Morgan, 2001). The move from eighth grade to ninth grade can be a crushing experience and a critical point in time in the student's academic and social development.

The move from middle school to high school is a critical period in the transitioning student's educational career and this period is even more difficult for students who are at-risk which frequently culminates with the at-risk student not finishing high school (Langenkamp, 2010). An eighth grade student moving to ninth grade is seen as peculiar and concerns exist regarding their success in high school (Allensworth & Easton, 2005; Dedmond, 2008; Farley & Neild, 2008). The National Research Council Committee on Increasing High School Student's Engagement and Motivation to Learn stated:

Like other forms of educational achievement (e.g., test scores), the act of dropping out is influenced by an array of factors related to both the individual student and to the family, school, and community settings in which the student lives. (2004, p. 10)

Middle school students transitioning to high school, who have at-risk factors as part of their characteristics, find the transition to high school a challenging one and one which affects whether they will graduate or dropout.

The number of public high school dropouts in the United States for the 2008-2009 school year was 607,709 and 20,609 of these dropouts were from the state of Florida (National Center for Education Statistics, 2011). The average freshmen graduation rate was 75.0% in 2003-2004, 74.7% in 2004-2005, 73.4% in 2005-2006, 73.9% in 2006-2007, 74.9% in 2007-2008, and 75.5% in 2008-2009 (National Center for Education Statistics, 2011). The AFGR has increased by only 0.5% during the 2003-2008 time frame. When compared to three decades ago, the number of ninth grade students not returning as tenth graders has increased by a factor of three (Haney, Abrams, Madaus, Whellock, Miao, & Gruia, 2005). The transition challenges faced by middle school students moving to high school can be connected to reduced student academic achievement, increased rate of students not graduating on time, and dropouts (Herlihy, 2007; Herlihy, Kemple & Smith 2005; Smith, 2007).

### Ninth Grade At-risk Factors

#### *Adolescents*

Middle school students transitioning to high school face challenges not only related to the transitioning to high school, but within the timeframe of ninth grade through twelfth grade they are also experiencing biological changes, known as puberty, where their bodies transform from that of a child to the body of an adult. This chapter of a student's development starts for females between the ages of eight and thirteen and for males between the age 9 and 14. Hispanic and Black students usually experience the start of puberty six months before White students (Eugster & Pamert, 2006). Students experiencing puberty will see the following:

- 1) The development of the gonads (e.g., ovaries in girls and testes in boys)
- 2) The development of secondary sex characteristics (e.g., growth of underarm and

- pubic hair, breast development, and penile and testicular growth)
- 3) Growth spurts of bones and muscles
  - 4) Changes in body shape and size (Eugster & Pamert, 2006, p. 1).

During the four years of high school, students are navigating fast emotional, physical, social and intellectual changes that play a critical role in the student's success in high school. This travel through the period of adolescence is especially important during the ninth grade school year for the transition student because they face an increased academic workload combined with changes in their social environment. During their freshman year, students are fighting new found fear as they deal with academics, peer pressure, finding themselves, and claiming their freedom (Walsh, 2002).

The experiences of ninth grade students during their ninth grade year are influential in deciding their level of success during all of their high school years and their success beyond high school. Students are not the only ones perplexed during this period, parents and teachers are also perplexed as a result of the profound and varying emotions of the adolescent. A student's academic achievement and motivation are affected by the intense changes they are experiencing in their behavior, emotions and bodies (Ryan, 2001). The accepted approach by educators, as middle school students transition into high school, has been a reactive one combined with a wait and see mode of operation; with actions being taken only when the student has academically and/or behaviorally failed at the beginning of their ninth grade year (Dufour, Dufour, Eaker, & Karhanek, 2004; Sornson, 2007).

The changes taking place in teenagers during the time of puberty affect their transformation psychologically (Rew, 2005). Potter, Schliscky, Stevenson, and Drawdy (2001) said "The degree to which an adolescent is able to make friends and be part of an accepting peer

group is a major indicator of how well the adolescent will adjust in the areas of social and psychological development” (p. 53). Friendships in our lives play an important role in who we are and during the high school years friendships are extremely important because acceptance and fitting in are very important to teenagers. During high school years, teenagers want to spend more time with friends, take more risks, and rebel against authority. The strings attaching teenagers to their parents are being cut as the teenager’s time spent with friends increases (Rew, 2005). Transition students experience reduced academic achievement and motivation (Akos & Galassi, 2004). Students transitioning from middle school to high school that experience lower academic achievement will also experience a lower view of themselves and an increase in the number of dropouts (Alspaugh, 1998).

The physical changes that the student is experiencing require that they deal with the conflict of accepting their new physical self. These physical changes are fast and more often than not results in the student centering their attention to their physical appearance (Potter et al., 2001). The physical changes experienced by teenagers are caused by the hormonal changes taking place within their bodies. Children during the ages of six to eight experience a rise in the levels of adrenal hormones which causes hair and bone growth, along with skin maturation. The puberty period starts during the ages of eight and nine, depending on gender, with the introduction of tropic hormones which add to a female’s breast development, growth of pubic hair, male’s testicular growth and growth spurts. During the later years of puberty, around the age of 14, females will start menstruation; males will start to experience the growth of beards as well as cracking voices as their tone deepens. (Lewis, 1991; Price, 2005; Susman & Rogol, 2004).



Teenager's social and emotional growths are affected by when puberty starts. When the outward physical traits of puberty appear, teenagers internally are self-conscious as a result of being different from their fellow teenagers, while their fellow teenagers externally show their reactions to the physical changes they can observe. Males who experience early signs of puberty usually experience greater self-esteem and increased popularity among their fellow teenagers. Females who experience early signs of puberty usually experience lowered self-esteem and an increased probability of depression, eating disorders and anxiety (Price, 2005; Susman & Rogol, 2004).

Males or females who experience late puberty often experience lowered self-esteem, and increased stress because they feel they are falling behind their fellow teenagers and will suffer being teased by their fellow teenagers (Price, 2005; Susman & Rogol, 2004). These students will be continuing to address their self-esteem resulting from their physical changes (Lewis, 1991; Makinen, Puukko-Viertomies, Lindberg, Siimes, and Aalberg, 2012; Price, 2005). During the mid-adolescence period, students will attempt to separate themselves from their parents and other figures of authority as a result of their emotional and cognitive changes. Some will take more risks as they identify more closely with their own values and start to exercise their own choices, freedom and increase responsibility (Lewis, 1991; Price, 2005).

Brains do not reach full maturity until we are about 24 years of age (White, 2004). The frontal lobes of the brain are used for memory, judgment, impulse control, social and sexual behavior; voluntary motor functions, decision making and other high level functions (Centre for Neuro Skills, n.d.). Neurological research indicates that because our brains do not fully mature until around our mid-twenties, teenagers have a difficult time making smart decisions that adults

find no difficulty in making (Blakemore, 2008; Dawson & Guare, 2009; Price, 2005; Willis, 2006; Willis, 2007).

As a result of teenagers having brains that have not fully matured, it impacts their ability to make judgments and their impulse control. This makes the teenager more open to risk-taking types of actions. This tendency to risk-take prior to thinking about the aftereffects could be the basis for teenage risk-taking actions (Kolb & Whishaw, 2003).

Because the rate of physical development is different for everyone, students may experience increased aggravation resulting from their not developing the level of abstract thinking needed to address the requirements of high school (Potter et al., 2001). The neuroendocrine system is defined as:

A system made up of cells with similar properties that are found throughout the body.

These neuroendocrine cells, as their name suggests, function as part of the nervous system and the endocrine system: they can secrete hormones and proteins that act on both systems (Stanford, n.d.).

Immature brains along with neuroendocrine changes possibly impact the sleep of teenagers and can affect the teenager's emotional state of mind (Rew, 2005). A teenager's sleep cycle is important with respect to their emotional development. If a teenager does not get enough sleep it has been shown that this is connected to the behavior, emotion and attention that affect their social development and academic success (Dahl, 2002). Transitioning from middle school to high school is an arduous experience for the transitioning student and is likely amplified by the added difficulties of the passage they experience by moving from childhood to adulthood.

## *Social Change*

In moving from their recognized middle school to their new unrecognized high school environment, middle school students transitioning to high school will face a multitude of changes. Transitioning middle school students not only had concerns about their academics as they moved to high school, but they shared that they also had social concerns (Akos & Galassi, 2004). These changes will be faced by the student while they simultaneously deal with the dynamic changes brought on by puberty. The transition to high school brings with it an increase in social stressors (Hussong & Stein, 2007).

Puberty impacts the physical, social, emotional and intellectual development of these students (Potter et al., 2001). Moving from one school to another has been found to increase the dropout rate for the moving student. The dropout rate increase is especially true for students moving during the period covering the eighth and tenth grades (Swanson & Scheider, 1999).

Lan and Lanthier (2003) found that the level of engagement between transitioning students decreases near the beginning period of transition. During this period transitioning students are faced with peer pressure from their fellow students to take part in activities that increase their risk of dropping out of high school. Some of these activities include skipping class or school, drug and alcohol abuse, disobedience, and violence.

Skipping class or not going to school has a high connection with dropping out of high school (Gleason & Dynarski, 2002). The ability of students earning high school class credit diminishes for those students who frequently miss school. By not attending their classes, students are unable to keep pace academically. Falling behind academically may result in the

student feeling more disconnect from their school. The transitioning student would be more likely to drop out of high school as a result of this disconnection (Holland & Mazzoli, 2001).

### *Academic Challenge*

Not only do transitioning middle school students have to contend with social change, they face an academic challenge associated with their transition to high school. As noted earlier, transition students experience reduced academic achievement. In a study that looked at the reduction in academic achievement, the outcomes implied that moving from one educational facility to another adversely affected a student's academic achievement (Alspaugh, 1998). The transition to high school brings with it an increase in academic stressors (Hussong & Stein, 2007).

Transition students who fail core subjects in the areas of science, social studies, mathematics or English have a greater probability of not graduating (Allensworth & Easton, 2005). A study was conducted by the consortium on Chicago School Research that involved 115,000 students of the Chicago Public School system and the study determined that “of the students who entered with very high eighth-grade test scores, almost one-quarter were off-track by the end of their freshman year” (Allensworth & Easton, 2005, p. 4). Transitioning students who had a weak academic foundation had the highest probability of course failure and even those transitioning students who one would not think would fail, due to their strong academic foundation, dealt with the challenges of the ninth grade (Neild, 2009). The Southern Regional Education Board (2002) reported that transitioning middle school students to high school had a 3 to 5 times greater chance of suffering a class failure when compared to all other high school grades.

### *At-risk Characteristics*

Classified as at-risk of dropping out of high school for the purposes of this study students who are not eligible for promotion from eighth to ninth grade because they did not earn a 2.0 GPA, failed one or more academic course, are non-proficient in reading and mathematics (as evidenced by their eighth grade FCAT performance), and/or have been retained two or more times (AT&T Foundation, 2008, p. 2). These students have characteristics that have placed them in the at-risk category and have identified them as being in need of actions to reduce the probability of them dropping out of high school. By identifying these at-risk students at an early stage, we may be able to take actions to offset the characteristics which have increased their risk of not graduating from high school.

The first year of high school is critical in determining the successful trajectory of the student towards graduation. The rate of retention for ninth graders is the largest rate of retention among all grades (Haney, Madaus, Abrams, Wheelock, Miao, & Gruia, 2004). Students transitioning from middle school to high school often experience adversity. Alspaugh reported that there was a “statistically significant achievement loss associated with the transition from elementary school to middle school at the sixth grade level” (1998, p. 20); he also reported that the achievement loss for students transitioning from middle school to high school was greater than the achievement loss experienced by students transitioning from kindergarten through the eighth grade.

A negative experience in middle school plays a major role in middle school students having a negative transition to high school (Mizelle, 2005). A large number of students experiencing a negative transition to high school provide hints of this coming negative

experience during their middle school years (Neild, Balfanz, & Herzog, 2007). A middle school student in sixth grade had a 75% probability while an eighth grade student had an 80% probability that they would be a high school dropout if they had at least one of the following characteristics:

- 1) A final grade of F in mathematics.
- 2) A final grade of F in English.
- 3) Attendance below 80% for the year.
- 4) A final “unsatisfactory” behavior mark in at least on class where “satisfactory” indicates good behavior, “improving” indicates student’s behavior is getting better and “unsatisfactory” indicates student’s behavior is not acceptable (Neild et al., 2007, p. 29).

Greater than 50% of eighth grade students who were identified as having one or more of these risk characteristics did not graduate from high school, while freshman who earned less than two credits or had an attendance rate less than 70% did not graduate from high school (Neild et al., 2007).

Four at-risk characteristics have been regularly identified by research as implying that a student will drop out of high school. These characteristics are core subject failure, retention, loss of interest/motivation, and behavior issues (Allensworth & Easton, 2007; Kennelly & Monrad, 2007b). Freshman who earned a grade of F in two or more core academic courses and did not advance to their sophomore year were at-risk to dropout (Allensworth & Eaton, 2005). Students who fail courses put themselves in the difficult position of making up credits that they should have earned while trying to keep pace to graduate on with their cohort. Failing the core classes of English, mathematics, social studies or science has been listed as a characteristic leading

students to drop out of high school (Allensworth & Easton, 2005; Balfanz, Herzog & MacIver, 2007; Neild & Balfanz, 2006).

One of the characteristics considered a strong sign leading to the failure of a course and then to a student dropping out of high school is excessive absences. An eighth grade student having a rate of attendance less than 80% has a 78% probability of being a high school dropout (Neild & Balfanz, 2006). Moderate attendance, 5 to 10 days of school, in freshman year has been connected to leading that student to not completing their secondary education (Allensworth & Easton, 2007). If a student missed 5 days of school there was a 63% probability that they finish high school in four years and those who missed less than 5 days had an 87% probability of completing high school in four years (Allensworth & Easton, 2007).

Retention has been identified as a flag telling us that a student is at-risk of not graduating from high school. Students who were retained during their elementary school years had a 64% probability of not graduating while students retained during their middle school years had a 63% probability of not graduating (Alexander, Entwisle, & Horsey, 1997). In high schools we find students whose age implies they should be in a particular grade, but due to the lack of credits they are classified as being in a lower grade. Greater than 50% of students who dropout of high school did not earn enough credits to place them beyond their freshman or sophomore year of high school and these students were 17 years of age or older. Retention appears to be a big factor in students failing courses and not maintaining the trajectory needed to graduate (Neild & Balfanz, 2006).

A student's loss of interest and motivation has also been flagged as an at-risk characteristic identifying a student as a potential dropout. School affiliated justifications provided by students who elected to dropout were the following: school was boring; no

motivation; and the school environment did not provide them with a challenge (Kennelly & Monrad, 2007b). The loss of interest and motivation is difficult to observe and quantify. When looking for signs of interest and motivation loss, a student's involvement in after school activities, level of school attendance and discipline history may give us the opportunity to gauge their level of interest and motivation (Kennelly & Monrad, 2007b).

Students transitioning from middle school to high school that display behavior problems are at-risk of becoming dropouts. Kolb and Whishaw (2003) reported that teenagers are more prone to risk-taking without contemplating the consequences of their decisions. Parents operate under the notion that the transitioning student has reached a level of development which would allow him to make rational and mature decisions.

“For some youth, age fifteen appears to be a period of particular susceptibility to negative influences and risk for increased deviance or maladaptive conduct” (Cadwallader, Cairns, & Farmer, 2003, p. 71). In a study conducted by Butts and Cruziero (2005), students were asked for their perceptions as to what components would lead them to being successful in their transition to high school and they responded with the following: staying away from bad influences, being with positive influences, proper conduct in the classroom and that success requires self-discipline. The students appreciated that proper behavior, negative influence avoidance, positive influences and self-discipline were important in their pursuit of a positive high school experience leading to graduation.

### Transition Programs

The challenges that transitioning middle school students encounter are physical, emotional and social creating an atmosphere filled with frustration and anxiety (Potter et al.,



2001). During the past 40 years, students transitioning to the ninth grade have experienced a reduction in their academic achievement resulting in a rise in the dropout rates (Miao & Wheelock, 2005). Queen (2002) stated the following with respect to middle school students transitioning to high school:

Many students experience worry, fear, and full-blown anxiety when thinking about high school. Couple this transition with the other changes that occur during this critical life stage, such as the physical changes children experience, and a major life event leaves students describing the transition as the most terrifying thing I've ever done and so bad I don't even want to talk about it. (p. 72)

Shriberg and Shriberg (2006) reported that going back to the 1970's the graduation rates have been experiencing a constant downward trend. This downward trend in graduation rates has been connected to the absence of support for the ninth grade in high school and disconnects between the grades of eight and ten (Miao & Wheelock, 2005). High schools are addressing the frustration and anxiety faced by these incoming ninth graders by providing them with programs developed to remove these negative elements. The programs are designed to develop an educational climate that focuses on the challenges faced by transitioning middle school students (International Center for Leadership in Education, 2005; Southern Regional Education Board, 2002). High school transition programs that are implemented need to focus on the diverse needs of the transitioning student and these needs include support academically, socially, and emotionally.

### *Transition Program Productive Components*

Educational leaders need to understand the seriousness of the concerns surrounding the

detrimental effects of middle school student transition to high school. Transition programs that have a positive effect on attendance, academic achievement and grade retention are productive programs. Multiple components need to be part of a transition program to make it a productive program.

- 1) Research suggests that productive transition programs have five or more diversified activities. The most common activities are bringing the incoming students to visit the new school, hosting meetings with administrators of both exiting and receiving schools to discuss programs and articulation, and having counselors from both schools meet.
- 2) The most productive transition programs are comprehensive and target activities to students, parents, and teachers. Students and parents have concerns about the academic environment and social community of the new school, as well as school procedures. All of these should be addressed to ease the fears about transition. Because they are an important support system for students, teachers and parents need to be knowledgeable as well.
- 3) A productive transition system should involve continuous planning among teams of teachers and school leaders. Communication between the two levels of schools should focus on the rising expectations for students, the necessary amount of academic preparation, and the high expectations and additional help that low-performing students may require to meet the standards. The transition committee should meet regularly to review, evaluate, and revise the program.
- 4) Productive transition programs attend to those students who are likely to have greatest difficulty with systemic transitions: girls, students with behavior problems, low

achievers, and minority or low socioeconomic status students. (Cauley & Jovanovich, 2006, p. 18)

A productive transition program includes a variety of activities, is all embracing and aware, involves all those that are impacted by the program, has a living plan, and provides the support most needed by transitioning students from middle school to high school (Cauley & Jovanovich, 2006).

### *The Boomerang Project*

The Link Crew Transition Program is maintained, marketed and developed by a company named The Boomerang Project and they work with 3,000 schools and 9,000 professional educators (The Boomerang Project, 2012). This transition program is implemented during the ninth grade year and trains juniors and seniors to be Link Crew Leaders and mentors so that they can help make the freshman year a positive experience for the transitioning student (The Boomerang Project, 2012b). Negative behavior and mental stress are reduced for incoming ninth graders when individuals provide them with support (Griffen, Newman, Newman, O'Conner, & Spas, 2007). The Link Crew Transition Program has four parts which are the following:

- High School Orientation - Link Leaders and freshmen start building the mentor relationship and freshmen receive information about how to be successful in high school.
- Academic Follow Ups - Link Leaders support freshman academic success and character development through structured classroom visits.
- Social Follow Ups - Link Leaders and freshmen connect outside the classroom at

social events to increase student engagement, and promote positive school climate.

- Leader Initiated Contacts - Link Leaders connect with their freshmen on a more individual basis. (The Boomerang Project, 2012b, p. 1)

This transition program is presented as an example of a transition program that is being used and because the author had the opportunity to seriously review the program at a previous school site and confirmed that it is being used in a number of school districts. The company's website has numerous positive reviews, but there is no empirical research to support the reviews.

#### *Ninth-Grade Academies*

In some school districts, ninth grade students do not attend classes or interact with upper classmen, but are kept separate from the rest of the school population. "By separating ninth graders into smaller learning communities, ninth grade academies can focus on the unique needs of this vulnerable population" (Hardy, 2006, p. 21). In separating ninth grade students from the rest of the school population the ninth grader's transition into their new school environment is smoother and brings the elements of satisfaction and communication together for parents and teachers (Clark & Hunley, 2007). Ninth-Grade Academies help transitioning students locate their social and academic footing (Cushman, 2006).

#### *Talent Development Model*

An example of the Ninth-Grade Academy format is the Talent Development Model. In a 1994 partnership involving the Center for Research on the Education of Students Placed at Risk (CRESPAR) and Patterson High School located in Baltimore, Maryland; the Talent Development Model was launched. CRESPAR and the Philadelphia Education Fund worked

together in 1998 rolling out the Talent Development Model in Philadelphia. The architecture of the Talent Development Model is centered on four sequential and associated parts which are the following:

- **Structural elements:** The concrete changes that Talent Development seeks to implement include changes in schools' organization, policies, curriculum content, resource allocations, and relationships with external entities. These include five broad and mutually reinforcing elements: (1) reorganizing schools into small learning communities; (2) research-based curricula, designed to move all students toward advanced coursework in English and mathematics; (3) recovery opportunities and extra help for students who need it; (4) staff professional development systems designed to support implementation; and (5) parent and community involvement activities that aim to encourage students' career and college development.
- **Supports and learning opportunities:** Implementation of structural elements in turn is expected to lead to improvements in school climate and functioning; positive changes in teacher and student behaviors, experiences, and expectations; and more productive use of internal and external resources.  
**Mediating outcomes:** Enhancement of supports and learning opportunities are hypothesized to produce mediating outcomes, including improvements in students' attitudes, levels of engagement, and sense of efficacy and competence that will enhance their willingness and capability to perform more effectively as students  
**performance outcomes:** The mediating outcomes are then expected to lead to changes in performance, including positive changes in student achievement,

progress toward graduation, and preparation for successful transitions to postsecondary education and employment. (Kemple, Herlihy, Smith, & Manpower Demonstration, R. C., 2005, p. 8-10).

Students follow a 4x4 extended period block schedule which translates to four 90 minute periods per day for a total of four courses per semester. This extended block schedule allows for double periods of English and math. The results for those schools that implemented the Talent development Model was a 5.1% improvement in attendance rate, an 8.2% improvement in academic curriculum completed, a 24.5% increase in algebra credit earned, and an 8.0% increase in students promoted to the tenth grade (Kemple et al., 2005).

Improvement is seen by schools that implemented the Talent Development Model but the authors of the study provide us with two cautions. The objectives set by the model for high school completion, post-high school education and employment will require greater improvement from the schools so that the objectives are reached. The results seen in this study demanded a large increase in funding (\$250 to \$350 per student) and challenging modifications to instruction, teacher support and the school organization (Kemple et al., 2005).

#### *Advancement via Individual Determination (AVID)*

In 1980 to address the needs of underserved students, Mary Catherine Swanson, chairperson of the English department at Clairemont High School located in San Diego, developed an academic elective named AVID (AVID, 2012). This program now reaches over 700,000 students in over 4,900 schools (AVID, 2012). Schools who wish to participate in the AVID program need to be AVID certified which means they satisfy the following AVID essentials:

1. AVID student selection must focus on students in the middle, with academic potential, who would benefit from AVID support to improve their academic record and begin college preparation.
2. Program participants, both students and staff, must choose to participate in the AVID program.
3. The school must be committed to full implementation of the AVID Program, with students enrolled in the AVID year-long elective class(es) available within the regular academic school day.
4. Students must be enrolled in a rigorous course of study that will enable them to meet requirements for university enrollment.
5. A strong, relevant writing and reading curriculum provide a basis for instruction.
6. Inquiry is used as a basis for instruction in the AVID classroom to promote critical thinking.
7. Collaboration is used as a basis for instruction in the classroom.
8. A sufficient number of tutors must be available in AVID elective class(es) to facilitate student access to rigorous curriculum. Tutors should be students from colleges and universities and they must be trained to implement the methodologies used in AVID.
9. AVID program implementation and student progress must be monitored through AVID Center Data System, and results must be analyzed to ensure success.
10. The school or district has identified resources for program costs, has agreed to implement all AVID Essentials and to participate in AVID certification. It has committed to ongoing participation in AVID staff development.

11. An active interdisciplinary AVID site team collaborates on issues of student access to and success in rigorous college preparatory courses. (AVID Region VI, 2010, p. 1-3)

Those that join the AVID program are provided with the opportunity during their tutoring sessions to experience an assortment of activities focused on college admission preparation (Ensor, 2009). The AVID program provided underserved students to social and cultural benefits that previously were not accessible to the students (Lozano, Watt & Huerta, 2009). Those participating in the AVID program had a higher level of motivation to enroll and complete courses that involved college level coursework (Watt, Powell, Mendiola & Cossio, 2006). High schools that implemented the AVID program had a larger increase in their Advanced Placement enrollment at 18.7% compared to 15.9% for high schools that did not implement the AVID program (Watt et al., 2006).

## Mentoring

### *Benefits of Mentoring*

As defined by the U.S. Department of Labor, “A mentor is a person who through support, counsel, friendship, reinforcement and constructive example helps another person, usually a young person, to reach his or her work and life goals” (United States Department of Labor, 2011). Programs that provide adult interaction with students have shown that they provide benefits for those participating students. (Dappen & Isernhagen, 2006). The promotion of academic achievement through interventions has also helped to reduce negative behavior such as drug abuse (Tarter, Sambrano, & Dunn, 2002; Gottfredson, Gerstenblith, Soule, Womer, & Lu, 2004). Young people facing social and personal obstacles have been helped by mentoring



interactions by the establishment of new associations and improved chances in life. These relationships and opportunities has helped students improve their academic achievement, work relationships and life experiences by developing needed skills like decision-making and problem-solving has improved (Flaxman & Ascher, 1992).

There are positive effects seen with students involved with mentoring programs (Dappen & Isernhagen, 2006). Those that have participated in mentoring programs have shown a decrease in the use of drugs and alcohol thus showing a positive impact to their growth socially and personally (Jekielek, Moore, Hair, & Scarupa, 2002; Tierney, 1995). Teenage pregnancy has also shown a decline in those participating in mentoring programs (Jekielek et al., 2002; Mecca 2001). Violent behavior has displayed a negative swing by mentoring program participants (Jekielek, et. al., 2002), and gang involvement (Mecca, 2001). Improved relationships have also been seen with mentoring participants with adults, parents and other students (Curtis & Hansen-Schwoebel, 1999). Mentees abilities to share feelings improved and they also developed improved self-confidence (Curtis & Hansen-Schwoebel, 1999). The way mentoring participants felt about school also changed positively (Curtis & Hansen-Schwoebel, 1999; Jekielek et al., 2002). This could be observed by improved attendance, better academic performance and lower rates of retention (Tierney, 1995; Curtis & Hansen-Schwoebel, 1999). Dropout rates were observed to decrease for these participants (Mecca, 2001), diploma completion increased, furthering their education beyond high school increased and they believed that they had a brighter future (The Mentoring Institute, 2001).

During the preceding 20 years, there have been many positive effects of mentoring such as improved attendance, scholarly achievement, pupil retention (Campbell & Campbell, 1997; Klein, 1996) and support in sociological and emotional areas (Bey & Holmes, 1990; Campbell &

Campbell, 2000; Kochan & Funk, 2000; Pascarelli, 1998). Students experiencing a close association with a mentor have been shown to benefit psychologically and academically (Grossman & Tierney, 1998; Rhodes & Grossman, 2000; Slicker & Palmer, 1993). A school based program that has peer involvement and targets the improvement of a student's individual and interpersonal abilities, school attachment, and standard social behavior has the ability to improve the student's ninth grade transition (Johnson, et al., 2008).

### *Mentoring Relationships*

According to Noam and Fiore (2004) there has been a fundamental repositioning toward realizing how young people are affected by relationships and their development in many areas. Mentoring programs that are organized, marketed towards diversity, supports interaction between pupil and instructor, course focused are administered within the school walls with the hope of creating a positive environment and improve the ability of mentor and mentee to bounce back in challenging situations (Ennett, Ringwalt, Throne, Rohrbach, Vincus, Simons-Rudolph, & Jones, 2003; Shin, 2001). Preventative factors and at-risk research during youth have not only enhanced understanding of these problem behaviors in youth, (Bry, 1996) but it has also identified variables that may be very relevant for addressing in prevention program execution (Johnson et al., 2008). Some important factors in the development of mentor relationships are, acceptable behavior between group members and between groups, attachment to school, and the amount and caliber of supervision and counsel provided by the mentors (Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Maddox & Prinz, 2003). Conveying the importance of the levels and multitude skills for improving the individual and life (Caplan, Weissberg, Grober, Sivo, Grady, & Jacoby, 1992; Epstein, Griffin, & Botvin, 2002). The fundamental theory for

therapy, teaching, parenting, out-of-school programs, mentoring, and youth work, have all had a remodel, such as female psychology, resilience studies and attachment models, centering on the role of relationships in healing, learning and growth (Noam & Fiore, 2004). For example, fully populated after-school programs are successful because students develop a bond to each other and to one or more of the adult participants of the program (Miller, 2003; Rhodes & Grossman, 2000). When students are connected to their school and the staff believes in their school, that school will likely be a strong performing school (Hamre & Pianta, 2001; Hughes, Cavell & Jackson, 1999; Spencer, 2000).

There are two kinds of mentoring: natural mentoring and planned mentoring (Floyd, 1993). Counseling, teaching, coaching and friendship are where we see natural mentoring occur, while through a designed program where mentor and mentee are formally matched, via a process, is where we see planned mentoring occur (Thompson & Kelly-Vance, 2001). Guidance and assistance is provided to at-risk students in these programs to help them develop into productive and accountable adults. Planned mentoring is a way to bridge the divide that may exist when natural mentoring does not have the chance to occur (Freedman, 1993). Youth who are facing disadvantages in the socioeconomic, socio-emotional and educational arenas can benefit significantly by having an adult mentor or role model as confirmed through resiliency research (Miller, 2003).

A number of aspects important to a successful mentoring program have been identified through research on active mentoring programs (Meyer & Bouchey, 2010). How long the relationship lasts between the mentor and mentee is one aspect that helps a mentoring program to be successful (Meyer & Bouchey, 2010). Positive results were seen in behavior, school work, and social connections for mentees involved with their mentor for a year or more (Grossman &

Rhodes, 2002). In studying programs run after school, a constant finding was that the effect of negative social environments was reduced when students had a relationship with adults who were caring and concerned allowing the student to share in new and one of a kind experience (Freedman, 1993; Katz, 1997; McLaughlin, 1994). In a study, conducted by Columbia University, it was found that the relationship between 100 well-known Americans, who came from humble beginnings, and their mentors were more likely to be named as playing an important role in their success (Rutherford, 1998).

### *Attachment*

Berman and Sperling (1994, p. 8) defined attachment as “the stable tendency of an individual to make substantial efforts to seek and maintain proximity to and conduct with one or a few specific individuals who provide the subjective potential for physical and/or psychological safety and security”. The long range effect of early interactions with mentors is a result of the continued internal cognitive and affective standard of self the mentee has in relation to close relationships experiences they have with mentors (Bowlby, 1988). These functional models affect a person’s emotional well-being, anticipation, and relational behavior in all close relationships (Georgiou, Demetriou, & Stavrinides, 2008). Bartholomew and Shaver (1998) state that longitudinal studies show that the effect of early attachment in childhood goes into adolescence and adulthood, and can be seen under the aspects of romantic relationships, peer relations and parenting

Attachment style is related to different types of relationships similar to those formed between teacher and student (Georgiou, et al., 2008). The relationship we have with our mothers from our early days plays a big role in the formation our own attachment style (Ainsworth, 1989;

Bowlby, 1980). The value of the relationships between concerned non-parent adults and students are beyond measure (Noam & Fiore, 2004). Students, as a result of these relationships, are able to develop attachments to schools, programs and community, which helps to form a solid base towards a productive life (Noam & Fiore, 2004). Research on attachment has demonstrated that a positive attachment to one or more individuals indicates a strong attachment to the mother or primary caregiver (Bowlby, 1980). Through interactions with others, people learn and grow (Rogers, 1959). The claim has been made by psychologists that the negative programming that an individual has developed from their negative experiences can be managed through positive mentor and mentee relationships (Lynch & Cicchetti, 1992). This supports the notion that teacher-student relationships, may help in modifying a child's negative self-perception and that of others, even though a child's views have been learned through experiencing negative family interactions (Noam & Fiore, 2004). Student academic performance can be improved along with an improved sense of self and mental well-being through positive teacher-student relationships (Spencer, 2000). There is a firm faith that relationships have preventative, restorative, instructive, and developmental powers (Noam & Fiore, 2004). What is critical for students that have been handicapped emotionally due to the type of parental relationship they have experienced is to develop positive adult mentoring relationships (Georgiou, et al., 2008). The mentoring relationship will be positive or negative based on the level of that relationship (Rhodes, 2005). Improved academic and emotional development has been observed with mentees who had a strong bond to their mentors. (Soucy & Larose, 2000).

### *Effects of Programs*

Taking into account the relationships between the behavioral standards, personal and environmental factors, and social cognitive theory indicates that intervening in the academic environment of a student could affect their academic progression (Holt, Bry, & Johnson, 2008). The level of student involvement, academic success and willingness to learn is related to the social, and personal experiences that student has experienced (Pajares, 1996; Zimmerman, 1989; Zimmerman & Schunk, 2001). A meta-analysis of 120 school-based prevention programs found that interactive programs had better results than non-interactive programs (Tobler & Stratton, 1997). School-based programs were able to improve their effectiveness by integrating across degrees of care (Greenberg, 2004). A number of students may benefit from the services of an all-around program, other students need a more focused program which targets their specific needs along with the all-around program to achieve the improvement of a students' well-being and counter the likelihood of negative behavior. (Johnson, et al., 2008). Peer-led prevention programs that are focused on improving a teenager's individual and relational skills, level of school bonding, and social standards have the capability of easing a student's transition to ninth grade (Johnson, et al., 2008).

### *Teacher Mentors*

If educational institutions are truly faithful to the belief that they wish to ensure the success of transition students, then their teachers will also be mentors (Maylor, 2009). A great majority of mentoring programs match an older individual with a younger person and the mentor then provides the mentee with support and counsel.

The mentoring relationship has resulted in the improvement of the mentee's grades, believed academic capability, attendance, and alcohol and drug abuse (Alspaugh, 1998; McPartland & Nettles, 2001). Adolescents have a basic drive to develop and hold onto good relationships with other people (Griffen et al., 2007). Teachers showing that they understand, and respect their students have a strong opportunity to influence the behaviors and demeanor of their students (Cushman, 2006).

The number of students confronted with being expelled; failing a course; or are a high risk for dropping out has grown; and that mentoring helps to develop a caring partnership between the mentor and mentee which can possibly lower the frequency of these negative outcomes (Chapman & Sawyer, 2001). Positive mentoring relationships during the teenage years of high school can possibly affect and advance promising results for the mentees lives (DuBois & Silverton, 2005). Transitioning students who receive support have an increased probability of good mental health and evading unsafe health practices (Griffen et al., 2007). The following is a list of successful qualities for a mentor:

- 1) Mentors listen: they maintain eye contact and give mentees their full attention.
- 2) Mentors guide: Mentors are there to help their mentees find life direction, never to push them.
- 3) Mentors are practical: they give insights about keeping on task and setting goals and priorities.
- 4) Mentors educate: Mentors educate about life and their own careers.
- 5) Mentors provide insight: Mentors use their personal experience to help their mentees avoid mistakes and learn from good decisions.
- 6) Mentors are accessible: Mentors are available as a resource and a sounding board.

- 7) Mentors criticize constructively: When necessary, mentors point out areas that need improvement, always focusing on the mentee's behavior, never his/her character.
- 8) Mentors are supportive: No matter how painful the mentee's experience, mentors continue to encourage them to learn and improve.
- 9) Mentors are specific: Mentors give specific advice on what was done well or could be corrected, what was achieved and the benefits of various actions.
- 10) Mentors care: Mentors care about their mentees' progress in school and career planning, as well as their personal development.
- 11) Mentors succeed: Mentors not only are successful themselves, but they also foster success in others.
- 12) Mentors are admirable: Mentors are usually well respected in their organizations and in the community (Richardson, 2005, p. 1).

### Summary

In the United States public schools are facing an ever increasing obligation to educate the children of America so that they are competitive in a global market environment. This preparation includes multiple paths and opportunities for the high school graduate. These paths and opportunities include post-secondary education, workforce or military service. A great deal of pressure is placed on high schools to best prepare students and get them to that all important graduation date. Being knowledgeable of how critical the ninth grade year is to our students, high schools need to execute plans that will support and positively affect transition students so that they are successful in that critical ninth grade year and carry that success on through high school graduation and beyond.



## CHAPTER 3: METHODOLOGY

### Introduction

This study was performed to determine if a relationship exists between participation in a school district Summer Transition Program prior to starting the ninth grade and academic achievement of students in Algebra I. Statistical analysis was also performed to determine if a relationship exists between the at-risk factors and academic performance in Algebra I, and student subgroups with participation rate of the Summer Transition Program. The study findings will be presented to the school district and used as a formative tool for the Summer Transition Program.

### Research Questions

The study was designed to answer the following research questions, which lead to the following hypotheses:

1. What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and other], English language learners [ELL], two or more years overage, students with disabilities [SWD]).

H<sub>0</sub>: Participation in the Summer Transition Program cannot be predicted by student subgroup membership. (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and other], English language learners [ELL], two or more years overage, students with disabilities [SWD]).

The independent variables are: gender, socioeconomic status, ethnicity (White, Black, Hispanic, Asian, and other), English language learners (ELL), two or more years overage,

students with disabilities (SWD). The dependent variable is dichotomous, indicating whether or not the student participated in the Summer Transition Program.

2. To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?

H<sub>0</sub>: There is no mean difference in academic course performance in Algebra I for students who complete the Summer Transition Program as compared to students who do not. The independent variable is whether or not the student participated in the Summer Transition Program. The dependent variable is the mean Algebra I GPA calculated from Algebra I grades earned in fall semester 1 and spring semester 2.

3. To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participant of the Summer Transition Program?

(not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics)

H<sub>0</sub>: There is no difference in academic success in Algebra I based on at-risk factors of eligible participants and non-participants and demographic variables for the Summer Transition Program (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics).

The independent variables are the at-risk factors for the Summer Transition Program eligibility. The dependent variable is the mean Algebra I GPA calculated from Algebra I

grades earned in fall semester 1 and spring semester 2.

### Selection of Participants

This study took place in a school district in Central Florida. The school district had a freshman cohort of 5,610 students for the 2009-2010 school year. The at-risk cohort population for this study included students from all high schools from the school district. This cohort had 942 freshmen who met the requirements to be classified as at-risk students and were eligible to participate in the Summer Transition Program. The criteria included students who were not eligible for promotion from eighth to ninth grade because they did not earn a 2.0 GPA, students who failed one or more academic course, students non-proficient in reading or math (as evidenced by their eighth grade FCAT performance), and students who were two or more years overage.

Candidates who were eligible to participate in the Summer Transition Program were identified during their eighth grade school year by their middle school administration as meeting the criteria of at-risk student. The identified students ( $N = 942$ ) and their parents were advised of their eligibility for the Summer Transition Program and these students self-selected to participate or not participate in the Summer Transition Program. Participants of the Summer Transition Program for the 2009-2010 school year totaled 433 and this translates to a 46% participation rate with 54% or 509 of the students self-selecting not to participate in the Summer Transition Program.

The population for all eligible students for the 2009-2010 Summer Transition Program was  $N = 942$ . This population had a gender makeup of 60.4% male ( $n = 569$ ) and 39.6% female ( $n = 373$ ). Ethnically the eligible students for the Summer Transition Program were 53.8%

White ( $n = 530$ ), 19.2% Hispanic ( $n = 181$ ), 19.1% Black ( $n = 180$ ), 2% Asian ( $n = 19$ ), 0.3% Indian ( $n = 3$ ), 5.5% Multiracial ( $n = 52$ ). The age range for students eligible to participate in the Summer Transition Program was 13 to 17 years old at the time of selection in their eighth grade year.

The gender of the 2009-2010 at-risk students who participated in the Summer Transition Program was 65.6% male ( $n = 284$ ) and was 34.4% female ( $n = 149$ ). The ethnic makeup of at-risk students who participated in the Summer Transition Program for the 2009-2010 school year was 49.2% White ( $n = 213$ ), 21.9% Hispanic ( $n = 95$ ), 21.2% Black ( $n = 92$ ), 1.4% Asian ( $n = 6$ ), 0.2% Indian ( $n = 1$ ), 6% Multiracial ( $n = 26$ ). The age range for students participating in the Summer Transition Program was 13 to 17 years old.

Non-participants of the Summer Transition Program for 2009-2010 were 56% male ( $n = 285$ ) and 44% female ( $n = 224$ ). The ethnic makeup of the at-risk students who did not participate in the Summer Transition Program for the 2009-2010 school year was 57.8% White ( $n = 294$ ), 16.9% Hispanic ( $n = 86$ ), 17.3% Black ( $n = 88$ ), 2.6% Asian ( $n = 13$ ), 0.4% Indian ( $n = 2$ ), 5.1% Multiracial ( $n = 26$ ). The age range of eligible students who did not participate in the Summer Transition Program was 14 to 16 years old.

Table 2

*Demographics for all Eligible Transition Students for 2009-2010 (N = 942)*

	<u>Participant (N = 433)</u>		<u>Non-Participant (N = 509)</u>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
<b>Gender</b>				
Female	149	34.4	224	44.0
Male	284	65.6	285	56.0
<b>Ethnicity</b>				
White	213	49.2	294	57.8
Black	92	21.2	88	17.3
Hispanic	95	21.9	86	16.9
Other	33	7.6	41	8.1
<b>SWD</b>				
No	345	79.7	383	75.2
Yes	88	20.3	126	24.8
<b>FRL</b>				
Female	94	21.7	80	15.7
Male	155	35.8	133	26.1
<b>Two or more years overage</b>				
No	396	91.5	465	91.4
Yes	37	8.5	44	8.6
<b>Eligible for Promotion</b>				
No	433	100.0	448	88.0
Yes	0	0.0	61	12.0

*Note.* FRL = free or reduced lunch. SWD = Students with disabilities. The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the dataset who were not White, Black or Hispanic.

## Instrumentation

Practices used in Florida during the time of the study for creating a four-year graduation cohort were modeled so that the calculation of academic progress for the participant and non-participant at-risk groups was accurate. The participant and non-participant at-risk groups for this study began high school during the 2009-2010 school year and were expected to graduate in May 2013 which defines them as being members of the 2013 cohort. Those students entering the ninth grade for the first time made for the definition of the initial cohort for this study. Students in this initial cohort were coded at the completion of each school year to identify them as having a status of continuing in the cohort, no longer in the cohort due to dropping out, or leaving the school district.

Semester letter grades for Algebra I during the 2009-2010 school year were obtained for the participant and non-participant groups. Algebra I letter grades are determined via teacher based assessments (unit, quarter, final), class discussions and quizzes, homework problems, class activities and projects and are based on the following scale: A = 4, B= 3, C= 2, D =1 and F= 0. The mean Algebra I GPA was computed as the mean letter grades earned in Algebra I during fall semester 1 and spring semester 2 of the participant's and non-participant's ninth grade year (2009-2010).

The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the dataset who were not White, Black or Hispanic. The at-risk indicator for the at-risk variable has been retained two or more times was not available on the data provided by the school district. The age of the student was used to identify those students that fell into this category and the variable has been retained two or more times was changed to two or more years overage. The student's date of birth and the date of August 1, 2009 were used to calculate the student's age when they started the 2009-2010

school year. Those students that were sixteen years of age or older were labeled as two or more years overage.

### Intervention

The school district that was studied provided a Summer Transition Program during the summers of 2009 and 2010 via an Achieve Grant provided by American Telephone and Telegraph Company (AT&T) in the amount of \$358,000. Students eligible to participate were identified in middle school by their middle school administration and were asked to participate in the Summer Transition Program for their zoned high school. Participating students were provided transportation to and from their zoned school to designated bus stops and lunch was provided for them at school during participation.

The program length was for a six week summer school session attended by other students in grades 10 through 12 who were attending for remediation. An academic incentive was provided whereby students in the Summer Transition Program who earned a grade of C or higher were able to earn a full high school credit, continued support during their high school career, and earned eligibility to participate in after school extracurricular activities and athletics. Eighth grade students in the school district who had not earned promotion status or were not on a path towards graduation, had a high rate of absenteeism (less than 85% attendance), had been retained at previous grade levels (two or more years overage), were academically unsuccessful (GPA 2.0 or below), had poor standardized test scores (below proficient on the Florida Comprehensive Assessment Test Mathematics or Reading), exhibited lack of school engagement (zero or very limited extracurricular participation), met the criteria for participation in the Summer Transition Program (AT&T Project Narrative, 2008, p. 3).

During the last semester of middle school, students who were identified as eligible to participate in the Summer Transition Program were provided with an invitation to take part in the program. The identification process was performed by the middle school principal in partnership with the school district's Information Services Department (ISD). Notification of a student's eligibility was provided via a letter mailed to the student's home. The zoned school, where the eligible student would be attending the Summer Transition Program, held a mandatory meeting providing information about the Summer Transition Program to the student and the student's parents/guardians. The counselors at the eligible student's middle school were responsible for working with and encouraging the eligible students to attend the Summer Transition Program.

Incentives to participate included the chance to earn promotional status as opposed to assigned status, an opportunity to earn a 12 credit college scholarship upon graduating with an overall GPA of 2.5 (AT&T Project Narrative, 2008, p. 2). The object of the program was not to remediate but to accelerate, giving students a head start for the ninth grade (AT&T Project Narrative, 2008, p. 1). The academic focus of the program was a Teach Forward Model. In the Teach Forward Model program; the students were taught the first two chapters of major academic areas prior to beginning the school year and actually taking the courses (AT&T Project Narrative, 2008, p. 1). The Teach Forward model objective was to provide at-risk students with an opportunity for early exposure to the core academic subjects of Biology, Algebra I, and English. The courses of Biology, Algebra I and English were chosen for the Summer Transition Program because these were the courses that were often failed by ninth graders. Adult and student mentors were assigned to each at-risk student that participated in the Summer Transition Program, and these mentors provided counsel for their mentees during the mentees time in high school.



For the purposes of this study, eligible students that participated in the Summer Transition Program prior to starting their 2009-2010 school year were the group compared with those eligible students that opted not to participate in the Summer Transition Program. Students participating in the Summer Transition Program were considered the participant group while students who decided not to participate were used as the non-participant group. A comparison of the academic performance in Algebra I between the participant and non-participant was used to determine the effectiveness of the Summer Transition Program.

#### Data Collection

Summer Transition Program participant and non-participant data for the 2009-2010 school year was maintained by the school district in their Schools Administrative Student Information (SASI) and Skyward systems. These systems were used to provide archival information for grades, attendance, demographic data, and discipline. Data for each Summer Transition program participant and non-participant were obtained.

The data source used to obtain the study data was also used to provide information to the Florida Department of Education and used to meet the grant requirements for reporting the Summer Transition Program results. The 2009-2010 data for the participants and non-participants of the Summer School Transition Program for the school district were maintained within the SASI and Skyward systems. Information provided to the Florida Department of Education was used to match with grant provided data participants of the Summer Transition Program.

#### Data Analysis

The participant and non-participant groups were created via self-selection. All at-risk

students were advised as to their eligibility to participate in the Summer Transition Program and it was their option to participate. The quasi-experimental design was used for this study and because the students self-selected into the participant and non-participant groups, propensity score analysis was used to match students who self-selected to participate to those students who self-selected not to participate. Propensity score is a statistical method used to calculate the probability that those within a population will be in the group receiving the intervention based on their characteristics when placement is not done randomly (Rubin, 1997). The method of propensity score analysis helps this study in its ability to pull together characteristics that a researcher would have a very hard time matching for those in the participant and non-participant groups (Creemers, Kyriakides & Sammons, 2010).

Specifically, propensity score was used to match participants and non-participants then they were grouped using the quintile method. The quintile method is when the range of propensity scores is divided equally among five quintiles (Wen, Leow, Hahs-Vaughn, Korfmacher & Marcus, 2012). Quintile 1 contained the lowest propensity score values ranging from 0 to .20, indicating students in this quintile had the lowest probability of participating in the Summer Transition Program; and Quintile 5 contained the highest propensity score values ranging from .80 to 1, indicating a probability of 80% or greater that the student would participate in the Summer Transition Program. Each Quintile was used to conduct the analysis with respect to demographic variables which were the variables used in the propensity score matching (gender, socioeconomic status, ethnicity [White, Black, Hispanic, and Other], English language learners [ELL], retention in grade, students with disabilities [SWD]) and at-risk variables (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the

Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics). The **school** district dataset did not have an indicator for the at-risk variable have been retained two or more times, so the age of the student was used to identify those students that fell into this category and the variable have been retained two or more times was changed to two or more years overage. The student's age upon entering high school on August 1, 2009 was used to make this identification. Those students that were sixteen years of age or older were labeled as two or more years overage. Because not all students in the school district dataset set had Algebra I grades for semester one and two, only students that had a complete set of demographics and an Algebra I grade in both semesters one and two were used in the analysis of Algebra I grade in Research Question Two.

Logistic regression was used to address research question one (What is the relationship of participation rate in the Summer Transition Program and membership in student subgroups?) which involves a dichotomous dependent variable. The independent variables are: gender, socioeconomic status, ethnicity (White, Black, Hispanic, Asian, and other), English language learners (ELL), two or more years overage, students with disabilities (SWD). The dependent variable is dichotomous, indicating whether or not the student participated in the Summer Transition Program. If the dependent variable is dichotomous, such as Pass/Fail, Yes/No, or as in this study Participant/Not a Participant, then other regression models are not appropriate (Lomax, 2007). A statistical test to determine goodness of fit for logistic regression models is the Hosmer-Lemeshow test (Agresti, 2002; Hosmer & Lemeshow, 2000). An important statistic for a logistical regression is the odds ratio (*OR*) which when  $OR = 1$  indicates a relationship between the dependent and independent does not exist (Lomax, 2007).

An independent *t*-test was used to analyze the participant and non-participant groups for

research question two (To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?). The independent variable is whether or not the student participated in the Summer Transition Program. The dependent variable is the mean Algebra I GPA calculated from Algebra I grades earned in fall semester 1 and spring semester 2.

Multiple regression was the statistical method used to address research question three (To what extent does academic success in Algebra I differ based on at-risk factors of eligibility for participants and non-participants and demographic variables for the Summer Transition Program?). The independent variables are the at-risk factors for the Summer Transition Program eligibility. The dependent variable is the mean Algebra I GPA calculated from Algebra I grades earned in fall semester 1 and spring semester 2.

#### Research Questions, Hypothesis and Variables

The following research questions and hypotheses provided direction for the study:

1. What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and other], English language learners [ELL], two or more years overage, students with disabilities [SWD]).

H<sub>0</sub>: Participation in the Summer Transition Program cannot be predicted by student subgroup membership.

The independent variables are: gender, socioeconomic status, ethnicity (White, Black, Hispanic, Asian, and other), English language learners (ELL), two or more years overage, students with disabilities (SWD). The dependent variable is dichotomous, indicating whether or not the student participated in the Summer Transition Program.

The dependent variable is dichotomous, indicating whether or not the student participated in the Summer Transition Program.

Statistical methods used were Propensity score analysis, Descriptive, and Logistic regression

2. To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?

H<sub>0</sub>: There is no mean difference in academic course performance in Algebra I for students who complete the Summer Transition Program as compared to students who do not.

The independent variable is whether or not the student participated in the Summer Transition Program. The dependent variable is the mean Algebra I GPA calculated from Algebra I grades earned in fall semester 1 and spring semester 2. Statistical methods used were Propensity score analysis, Descriptive, and Independent *t* test.

3. To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics).

H<sub>0</sub>: There is no difference in academic success in Algebra I based on at-risk factors of eligible participants and non-participants and demographic variables for the Summer Transition Program.

The independent variables are the at-risk factors for the Summer Transition Program eligibility and these factors are not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, or two or more years overage, Non-proficient scores on the Florida Comprehensive Assessment Test (FCAT) in Reading or Mathematics. The dependent variable is the mean Algebra I GPA calculated from Algebra I grades earned in fall semester 1 and spring semester 2.

Statistical methods used were Propensity Score Analysis, Descriptive, and Multiple Regression

### Summary

The purpose of this quasi-experimental design study was to address three research questions discussed in this chapter. The first research question tried to answer whether a relationship exists between the participation rate of the Summer Transition Program and the student subgroups. The question of whether there is a mean difference in academic success based on participating in the Summer Transition Program was addressed by the second research question and if a relationship exists between academic success and at-risk factors of eligibility for participants and non-participants of the Summer Transition Program was addressed by the third research question.

Statistical methods used in this study were descriptive, propensity score analysis, multiple regression logistic regression and the independent *t*-test. Descriptive statistics were run to get a better understanding of the basic features of the study participants and non-participants. The propensity score analysis was used to match participants and non-participants having similar

characteristics because their group assignment was based on self-selection. Multiple regression was run to obtain estimation with respect to the relationship among the independent and dependent variables. Logistic regression was used to address the event of participating or not participating in the Summer Transition Program based on effect of the student subgroup variables. The independent  $t$  test was run to help in determining whether there was a statistically significant difference between the participant and non-participant groups with respect to their means of academic success in Algebra I.

Chapter 3 provides information on the research questions, hypotheses, population, data collection, data sources and data analysis. This study was performed to determine the affect the Summer Transition Program had on the academic success of at-risk students. In Chapter 4 the findings of the research are presented.

## **CHAPTER 4: ANALYSIS OF DATA**

### **Introduction**

The intent of this study was to determine the relationship between participation in a school district Summer Transition Program prior to starting the ninth grade and the academic achievement of students in Algebra I. The participation relationship was studied for two groups of eighth graders transitioning to the ninth grade with one group being participants and the second group being non-participants. This study looked at three relationships to address the study's purpose and the relationships were (a) student subgroup and participation rate in the Summer Transition Program, (b) analysis of academic performance in Algebra I between participants and non-participants, and (c) analysis of academic performance in Algebra I and at-risk eligibility factors. The results and findings for the three research questions are presented in chapter 4.

Archival data were collected on the participants and non-participants in this study. Data were obtained for the 2009-2010 school year and the data sources were the Schools Administrative Students Information (SASI) and Skyward systems both of which are maintained by the school district. The archival data provided by these systems were demographic, attendance, discipline, grades, and student age.

### **Propensity Score Matching**

Participants of the Summer Transition Program were matched to non-participants using propensity score matching. Using logistic regression, the propensity scores were calculated based on gender, ethnicity, socioeconomic status, and students with disabilities (SWD), as well as the at-risk variables of not eligible for promotion and two or more years overage. Due to the



small number of students identifying as Asian, Indian, and multiracial, these categories were combined into one category ('other'). Thus the racial categories included White, Black, Hispanic, and Other. Due to the small number of ELL students ( $n = 22$ ), these students were excluded from the analyses.

After creating the propensity scores, the scores were used to match participants to non-participants using the quintile matching method. With this method, the propensity scores were ranked and divided approximately equally into five quintiles. Quintile 1 reflected the lowest probability of participation whereas quintile 5 reflected the highest probability of participation. In reviewing the quintiles, only quintile five included participants. Thus, the participants and non-participants whose data was analyzed in the research questions belonged to the 5th quintile ( $n = 603$ ), and this therefore excluded 339 non-participants. This reflects 64% retained from the matching process (i.e.,  $603/942$ ).

In the subsequent analyses of research question one and research question two, the total  $N$  is less than the 603 selected in the fifth quintile. This is due to the fact that not all students had an Algebra I grade. Students needed to have a complete set of demographics and an Algebra I grade in both semesters one and two to be part of the Algebra I analysis. The participant and non-participant groups were  $n = 280$  and  $n = 118$  respectively. This should be considered a limitation of the dataset.

The first research question compares participation rate of Summer Transition Program participants by student subgroups: What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status [SES], ethnicity [White, Black, Hispanic, and Other], English language learners [ELL], two or more years overage, students with disabilities [SWD]). Logistic regression was applied to answer

research question one. Research question two examines the difference in Algebra I grade between Summer Transition Program participants and non-participants and was addressed by using an independent *t*-test: To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants? A multiple linear regression model was used to address research question three: To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics).

#### Descriptive Statistics

Descriptive statistics were generated on students that were matched in the propensity score analysis. These statistics, therefore, reflect only students in the 5<sup>th</sup> quintile ( $n = 603$ ). Statistics presented first reflect all students in the 5<sup>th</sup> quintile (participants and non-participants). This is followed by statistics on participants of the Summer Transition Program and then non-participants.

The population for the students in the fifth quintile for the 2009-2010 Summer Transition Program was  $n = 603$ . This population had a gender makeup of 67.7% male ( $n = 408$ ) and 32.3% female ( $n = 195$ ). Ethnically, the fifth quintile students for the Summer Transition Program were 43.8% White ( $n = 264$ ), 28.7% Black ( $n = 173$ ), 20.6% Hispanic ( $n = 124$ ), and 7.0% Other ( $n = 42$ ). Students with disabilities (SWD) made up 20.0% ( $n = 121$ ), students who were not classified as SWD made up 80.0% ( $n = 482$ ). The free and reduced lunch (FRL) male

makeup for this population was 52.9% ( $n = 319$ ) and 47.1% female ( $n = 284$ ). Those students who were not two or more years overage in the fifth quintile was 92.2% ( $n = 556$ ) and those students who were two or more years overage was 7.8% ( $n = 47$ ). The fifth quintile population had a not eligible for promotion makeup of 90.0% ( $n = 542$ ) and eligible for promotion makeup of 10.1% ( $n = 61$ ).

There were 398 students in the fifth quintile (66%) who participated in the 2009-2010 Summer Transition Program. The gender makeup of the 2009-2010 at-risk students in the fifth quintile who participated in the Summer Transition Program was 64.8% male ( $n = 258$ ) and 35.2% female ( $n = 140$ ). Ethnically, the fifth quintile participant group was 49.7% White ( $n = 198$ ), 21.1% Black ( $n = 84$ ), 22.4% Hispanic ( $n = 89$ ), and 6.8% Other ( $n = 27$ ). Students with disabilities (SWD) made up 20.9% ( $n = 83$ ), students who were not classified as SWD made up 79.1% ( $n = 315$ ). The free and reduced lunch (FRL) male makeup for the participant population was 57.3% ( $n = 228$ ) and 42.7% female ( $n = 170$ ). Those students who were not two or more years overage in the fifth quintile participant population was 91.5% ( $n = 364$ ) and those students who were two or more years overage was 8.5% ( $n = 34$ ). There were 398 students in the fifth quintile participant population (100%) who were not eligible for promotion and zero students in the fifth quintile non-participant population (0.0%) who were not eligible for promotion. The breakout of the eligible for promotion variable between the participant and non-participant groups is the result of multiple criteria for being eligible for the Summer Transition Program. The data were run to see what impact removal of the eligible for promotion variable had on the testing and this resulted in all the logistic regression models being invalid (not enough observations in the variables, not showing any difference from a constant-only model). The eligible for promotion makeup will be further discussed in chapter 5.

There were 205 students in the fifth quintile (34%) who did not participate in the 2009-2010 Summer Transition Program. The gender makeup of the 2009-2010 at-risk students in the fifth quintile who did not participate in the Summer Transition Program was 73.2% male ( $n = 150$ ) and 26.8% female ( $n = 55$ ). The ethnicity of the fifth quintile non-participant group was 32.2% White ( $n = 66$ ), 43.4% Black ( $n = 89$ ), 17.1% Hispanic ( $n = 35$ ), and 7.3% Other ( $n = 15$ ). Students with disabilities (SWD) made up 18.8% ( $n = 38$ ), students who were not classified as SWD made up 81.5% ( $n = 167$ ). The free and reduced lunch (FRL) male makeup for the non-participant population was 44.4% ( $n = 91$ ) and 56.6% female ( $n = 114$ ). Those students who were not two or more years overage in the fifth quintile non-participant population was 93.7% ( $n = 192$ ) and those students who were two or more years overage was 6.3% ( $n = 13$ ). The fifth quintile non-participant population had a not eligible for promotion makeup of 70.2% ( $n = 144$ ) and an eligible for promotion makeup of 29.8% ( $n = 61$ ). The majority of fifth quintile participants (64.8%) and non-participants (73.2%) were male. All fifth quintile participants and non-participants are classified as free and reduced lunch. The larger part of fifth quintile participants (79.1%) and non-participants (81.5%) are not students with disabilities. The demographic data for the fifth quintile are shown in Table 3.

Table 3

*Demographic Data for Propensity Analysis Selected Sample*

	<u>Participant (n = 398)</u>		<u>Non-Participant (n = 205)</u>	
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>
<b>Gender</b>				
Female	140	35.2	55	26.8
Male	258	64.8	150	73.2
<b>Ethnicity</b>				
White	198	49.7	66	32.2
Black	84	21.1	89	43.4
Hispanic	89	22.4	35	17.1
Other	27	6.8	15	7.3
<b>SWD</b>				
No	315	79.1	167	81.5
Yes	83	20.9	38	18.5
<b>FRL</b>				
Female	170	42.7	114	56.6
Male	228	57.3	91	44.4
<b>Two or more years Overage</b>				
No	364	91.5	192	93.7
Yes	34	8.5	13	6.3
<b>Eligible for Promotion</b>				
No	398	100.0	144	70.2
Yes	0	0.0	61	29.8

*Note.* FRL = free or reduced lunch. SWD = Students with disabilities. The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the dataset who were not White, Black or Hispanic.

## Testing the Research Questions

### *Research Question One*

*Question 1: What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status (SES), ethnicity [White, Black, Hispanic, Asian, and other], English language learners [ELL], two or more years overage, students with disabilities [SWD]).*

### *Setup and Rationale*

The participation variable is a binary variable and not a continuous variable. The method best equipped to answer research question one is a logistic regression. A logistic regression differs from a linear regression in that a logistic regression maps to a logistic curve, is designed for binary dependent variables, and its interpretation is that of likelihood (e.g., condition 1 is  $X$  times more likely to occur than condition 2). When we look at research question one, with respect to likelihood, a connected example would be if a Hispanic male is more likely to participate in the Summer Transition Program than a Black male.

The independent variables were (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and other], English language learners [ELL], two or more years overage, students with disabilities [SWD]). Retention was binary, representing whether or not a student was retained two or more times. Binary dummy variables were created for ethnicity categories of African American, Hispanic, Asian, and other. White was the reference category. All independent variables were entered in the model simultaneously.

### *Assumptions*

Before running the model, assumptions needed to be tested and met for valid use of the

logistic regression test. The assumptions tested were tested for noncollinearity, linearity, independence of errors, and outliers. The assumptions need to be met and if they are not met then the results could be misleading and lead to improper interpretation of the data.

#### *Noncollinearity*

Multicollinearity occurs when two variables are highly correlated; they essentially provide the same information. The tests used to check for noncollinearity were variable inflation factor (VIF), tolerance value, and review of condition indices. The VIF value should be less than 10, the tolerance value should be greater than 0.10 and the condition indices should be less than 10. All VIF values were equal to or less than 1.27, the minimum tolerance value was .79, and maximum condition index was 5.16. The assumption of noncollinearity was met for this model.

#### *Linearity*

Linearity is when a dependent variable has a linear relationship with one or more independent variables and can be computed as the linear function of the independent variables. The test for this assumption is multiplying each continuous independent variable by its natural log (ln). The independent variables should not be significant in the model. All variables are binary and there was no need to perform checks for linearity.

#### *Independence of Errors*

The error terms are independent and not correlated to the errors of earlier observations. This was checked by plotting the standardized residuals against each independent variable. The standardized residuals should fall approximately within the range of -2 and 2 units of zero. The majority of observations were within the approximate range of -2 and 2. The assumption for independence of errors has been satisfied.

### *Outlier*

These are lower or higher values that are significantly different than other values that are part of the sample (Pallant, 2010). Outliers can greatly change the shape of a distribution and cause a regression to be incorrectly identified as significant or not significant. A data point's influence can be estimated using Cook's distance which measures the effect of removing a given observation (Mendenhall, Mendenhall & Sincich, 1996). Using Cook's distance, dfbeta (standardized Cook's), leverage values, and standardized residuals; Cook's distance should be less than 1; leverage values should be less than .2; standardized residuals should be within the range of -3.3 and 3.3; dfbeta values should be less than 1. The greatest Cook's distance was .13, greatest leverage was .06, and standardized residuals were between -2.7 and 1.3. Dfbeta values were all equal to or less than .01. The assumption for outliers has been met.

### *Results*

Significant results from the Hosmer and Lemeshow Goodness of Fit Test,  $\chi^2(8) = 68.12$ ,  $p < .001$ , indicates that this model is not a good fit. Pallant (2010, p. 176) states "for the Hosmer and Lemeshow Goodness of Fit Test poor fit is indicated by a significance value less than .05". However, results from this test are not definitive in saying that this model is not a good fit. Cohen's  $d$  interpretation of effect size indicates small effect size indices (Cox & Snell  $R^2 = .08$ , Nagelkerke  $R^2 = .11$ ). According to Cohen's definitions, .20 is small, .50 is medium, .80 is large in terms of effect size (Steinberg, 2008).

The predictor variables, as a group, were not necessarily very effective predictors of program participation. However, Black ethnicity, compared to White (Wald = 34.60,  $df = 1$ ,  $p < .001$ ); being Black makes a student 28% as likely as a White student to be a participant. FRL status (Wald = 11.06,  $df = 1$ ,  $p = .001$ ); receiving free or reduced lunch makes a student twice as



likely (odds ratio = 1.90) as a non-FRL student to be a participant. The variables of being Hispanic (odds ratio = .67) or another ethnicity (odds ratio .51) as compared to White, student with disabilities (odds ratio = .97), and being two or more years overage (odds ratio = 1.34) did not indicate any significant differences in the likelihood of being a participant. The logistic regression model accurately predicted 74.6% of the students in the sample (31.2% for those non-participants and 97% for participants). The Kappa coefficient (a measure of classification accuracy) of .33 indicated that the model was able to classify the observations at a level of accuracy moderately greater than chance. The implications are discussed in chapter 5. Logistic regression results used to answer research question one are shown in Table 4.

Table 4

*Summary of Hierarchical Regression Analysis for Demographics (N = 603)*

Variable	<i>B</i>	<i>SE B</i>	$e^B$	<i>p</i>
Constant	1.03	.21		.000
Gender	-.26	.20	0.77	.200
SWD	-.03	.32	0.97	.886
FRL	.64**	.19	1.90	.001
Ethnicity				
Black	-1.29**	.22	0.28	.000
Hispanic	-.40	.26	0.67	.123
Other	-.67	.36	0.51	.067
Retention	.30	.36	1.34	.410

*Note.*  $e^B$  = exponentiated B. SWD = Students with disabilities, FRL = free or reduced lunch. Gender is coded as 1 for male and 0 for female. Retention, SWD, FRL, and the ethnicity predictors are all coded as 1 for yes and 0 for no. White ethnicity is the reference category. The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the dataset who were not White, Black or Hispanic. \* $p < .05$ . \*\* $p < .01$ .

## *Research Question Two*

*Question 2: To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?*

Research question two was addressed with an independent *t*-test examining the difference in Algebra I grade between Summer Transition Program participants and non-participants. The assumption of normality was tested before running the independent *t*-test. Normality is “that each of the populations follows the normal distribution” (Lomax, 2007, p. 287). For an independent *t*-test, normality is tested for each group, in this case, the participant and non-participant groups.

Since only students having a complete set of demographics and an Algebra I grade in both semesters one and two were used in the analysis of Algebra I grade, the resulting *n*'s for the participant and non-participant groups were  $n = 280$  and  $n = 118$  respectively. This can be considered a limitation of the dataset. In this analysis, grades between two semesters were averaged to receive an overall grade. The scores ranged from 4(A), 3(B), 2(C) 1(D), and 0(F). Fractional grades were possible due to averaging, for instance, a student with a grade of A in one semester and a grade of B in the other semester would result in an overall grade of 3.5.

### *Normality*

Normality is tested by calculating the two statistics of Skewness and Kurtosis. Skewness is “the extent to which a distribution of scores deviates from perfect symmetry” (Lomax, 2007, p. 68). Skewness is “the extent to which a distribution of scores deviates from perfect symmetry” (Lomax, 2007, p. 68). The skewness value should fall between -2 and 2. “Kurtosis is

conceptually defined as the ‘peakedness’ of distribution” (Lomax, 2007, p. 71). The kurtosis value should fall between -2 and 2. The normality tests for research question two produced non-participant skewness and kurtosis values of 0.13 and -0.78, respectively. The participant group had skewness = 0.39 and kurtosis = -.056. The Levene’s test has an  $F$  value of 1.68, significance value of .196 and a  $t$  value of 2.06. This indicates that there is no significant difference (.196 > 0.05) between variances making the variances homogeneous. These results indicate that the Algebra I grade meets the assumption for normality.

### *Results*

The independent  $t$ -test,  $t(396) = 2.06, p=.04$ , indicates that there is a significant difference in overall Algebra I grades between the participant and non-participant groups. The program participants showed a slightly lower Algebra I grades ( $M=1.57, SD = 1.06$ ) than among the non-participants ( $M = 1.82, SD = 1.17$ ). Cohen’s  $d$ , a measure of practical significance, was calculated to be .21. This indicates a small effect size in participation explaining the differences between students on this measurement.

The mean difference in Algebra I grade between the participant group and non-participant group was just -.25 which was not expected and will be discussed in chapter 5. The small effect size of .21 tells us that participation in the Summer Transition Program explains little of the difference in the participant’s Algebra I grade. Even though the independent  $t$ -test indicates a statically significant difference in overall grade, the effect size suggests little practical importance. Overall, what this indicates is that the participant’s academic performance in Algebra I was slightly weaker than the academic performance in Algebra I of the non-participants. Summary descriptive and independent  $t$ -test results are provided in Table 5.

Table 5

*Descriptive Statistics for independent t-test, Algebra I Grades for Participants and Non-participants*

Status	<i>M</i>	<i>SD</i>	95% CI	
			<i>LL</i>	<i>UL</i>
Non-Participant ( <i>n</i> = 118)	1.82	1.17	1.61	2.03
Participant ( <i>n</i> = 280)	1.57	1.06	1.45	1.70

*Note.*  $t(396) = 2.06$ ,  $p = .04$ ,  $d = .21$ . CI = confidence interval, *LL* = lower limit, *UL* = upper limit.

As presented in Table 3, in quintile 5 there were 61 students who were eligible for promotion that did not participate in the Summer Program. In comparison, there were no students eligible for promotion that participated in the Summer Program. Since none of the students eligible for promotion elected to participate in the Summer Program, this may indicate that those eligible for promotion should not be identified as at-risk students. A frequency of grades analysis was performed, excluding the eligible for promotion students. This was performed to obtain more information with respect to the grade makeup for participants, non-participants, ethnicity groups, and free and reduced lunch (FRL) students. When the 61 students who were eligible for promotion were excluded the average Algebra I grade for non-participants was ( $M = 1.42$ ) slightly lower than that of participants ( $M = 1.57$ ). This result would indicate that the participating students did slightly better than the non-participant students.

After excluding students eligible for promotion ( $n = 61$ ), a larger proportion of students that participated in the Summer Program earned passing grades (A, B, C) in Algebra I (45%) as compared to students that did not participated in the Summer Program (35%). Fifty percent of Blacks earned a grade of D or F in the participant group while 50% of Blacks earned a grade of

D or F in the non-participating group. For Black students, Algebra I grades are similar regardless if they participated or did not participate in the Summer Transition Program. Participating Hispanic students earned 37.3% of grade A, B or C while 15.4% of non-participating Hispanics earned a grade of A, B, or C. This indicates that Hispanics who participated in the Summer Transition Program did perform better in Algebra I than their non-participating peers. Examining the FRL students shows that 35.2% of participating FRL students earned a grade of A, B, or C, while 28.6% of the non-participating FRL students earned a grade of A, B, or C. One would be strongly inclined to say that even though the average GPAs of the two groups are very close to each other, participating in the Summer Transition Program does appear to have helped the participants perform at a higher academic level. The results from research question two will be discussed in chapter 5. The frequency of grades results are shown in Table 6.

Table 6

*Frequency Distribution of Grades for Participant and Non-Participants Excluding Eligible for Promotion Participant (n = 280) and Non-Participant (n= 57)*

	A	B	C	D	F	M
Participant	10	35	80	90	65	1.57
Ethnicity						
White (n = 141)	6	13	43	43	36	1.53
Black (n = 60)	1	9	20	17	13	1.59
Hispanic (n = 59)	2	8	12	22	15	1.59
Other (n = 20)	1	5	5	8	1	2.05
FRL (n = 157)	6	21	44	49	37	1.57
Non-Participant	3	6	11	22	15	1.42
Ethnicity						
White (n = 25)	2	1	7	8	7	1.52
Black (n = 10)	1	2	2	4	1	1.75
Hispanic (n = 13)	0	1	1	7	4	1.03
Other (n = 9)	0	2	1	3	3	1.30
FRL (n = 35)	2	3	5	15	10	1.33

*Note.* FRL = free or reduced lunch. Non-participant n = 57 due to the exclusion of students eligible for promotion. Grades are the letter grades A, B, C, D, and F averaged over two semesters. The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the Dataset who were not White, Black or Hispanic.

### *Research Question Three*

*Question 3: To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, are two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] Reading or Mathematics).*

### *Setup and Rationale*

Research question three was answered by creating a multiple linear regression using the Algebra I grade as the dependent variable and entering a variety of independent variables into two models. The variables were entered hierarchically with prior retention and promotion eligibility entered into Model 1 followed by the addition of program participation in Model 2. Use of the models helped to control for any confounding effects.

### *Assumptions*

Prior to running the multiple linear regression, assumptions were tested. If the assumptions are not met, results may be misleading and data interpretation may be incorrect. The assumptions of outliers, linearity, normality, and multicollinearity were reviewed.

#### *Outliers*

Outliers are values that are significantly lower or higher than other values that are part of the sample (Pallant, 2010). Cook's distance should be less than 1; centered leverage values should be less than .5. The greatest Cook's distance was .04, greatest centered leverage was .06. Because of the binary nature of the independent variables, a review of a scatterplot of independent to dependent variables was not examined as a tool for outlier detection. The assumption for outliers has been met for this model.

#### *Linearity*

When a dependent variable has a linear relationship with one or more independent variables and can be computed as the linear function of the independent variables, this is known as linearity (Pallant, 2010). Studentized residuals versus predicted values and studentized residuals versus each independent variable, which should fall between -2 and 2 with no major pattern, were not determined since our independent values are all binary. Based on the plot, the



assumption of linearity was met.

### *Normality*

Normality was tested via use of a boxplot and Q-Q plots along with calculating the two statistics of skewness and kurtosis. Lomax (2007, p. 68) defines skewness as “the extent to which a distribution of scores deviates from perfect symmetry”. The skewness value should fall between -2 and 2. Lomax (2007, p. 71) states that “Kurtosis is conceptually defined as the ‘peakedness’ of distribution”. The kurtosis value should fall between -2 and 2. The normality tests for research question three calculated a studentized residual of .31 and the unstandardized residual of .32. The boxplots did not have an extreme outlier and the Q-Q plots, which plots normalized data versus standardized data, were generally a straight line indicating that the data is generally are normally distributed.

### *Multicollinearity*

This is when two variables explain too much of the variance. The tests used to check for multicollinearity were tolerance, variable inflation factor (VIF), eigenvalues, and condition indices. Tolerance should be greater than .10. The minimum tolerance is .64 for the at-risk eligibility factors. The VIF should be less than 10; the VIF is 1.56 for the at-risk eligibility factors. Eigenvalues should not be close to zero and there is only one eigenvalue close to zero (model2, .09) for the at-risk eligibility factors. Multicollinearity can be measured via condition indices (University of South Florida, n.d.). The preferred value of the condition indices would be less than 15, but should be less than 30. The maximum condition index is 4.83. These tests denote that there is no multicollinearity.

## *Results*

To determine if a difference existed between at-risk eligibility factors of two or more years overage and eligibility for promotion with Algebra I grade a multiple linear regression was used to answer research question three. The results for research question three are provided in two models. Model 1 contains the at-risk eligibility factors of two or more years overage and eligibility for promotion. Model 2 has the same at-risk eligibility factors as Model 1 along with participation in the Summer Transition Program.

### *Two or More Years Overage and Eligibility for Promotion*

Model 1 had the independent variables of two or more years of overage and eligibility for promotion without the variable of Summer Transition Program participation. This model was significant:  $F(2, 395) = 12.48, p < .001$  and  $R^2 = .059$  indicates that 5.9% of the variation in Algebra grades was explained by this model.

Model 2 added participation in the Summer Transition Program while holding two or more years overage and eligibility for promotion constant. This did not result in adding significantly to the model with  $\Delta F(1, 394) = 1.18, p = .28$ . Practically no additional variability was explained with the addition of Summer Transition Program participation with  $\Delta R^2 = .003$  (0.3% additional variability explained).

The final model (Algebra I Grade =  $1.42 - 0.16*(\text{Overage}) + 0.91*(\text{Eligibility}) + 0.16*(\text{Participant})$ ) overall was significant:  $F(397) = 8.72, p < .001$ . The multiple correlation coefficient:  $R^2 = .25$  indicates a weak relationship between observed and model-predicted values of the dependent variable.

Model 1 containing the at-risk factors of two or more years overage and eligibility for promotion explained only 5.9% of the variation in Algebra I grade. Since only 5.9% of the

variation in Algebra I grade is explained by the at-risk factors, this means that 94.1% of the variation in Algebra I grade is explained by other variables not included in the model. In Model 2 the inclusion of participation in the Summer Transition Program explained only 6.2% of the variability in Algebra I grade, a difference of .3% without participation in the Summer Transition Program. This indicates that 93.8% of the variability in Algebra I grade is explained by other variables not included in the model. The final model has a weak association between the independent variables of at-risk factors of two or more years overage, eligibility for promotion and the dependent variable Algebra I grade. The results from Model 1 and Model 2 tell us that there is little relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program. As discussed in research question two, the at-risk factor of eligible for promotion may not be indicative of a student being at-risk. Summer Transition Program model summaries are provided in Table 7.

Table 7

*Summary of Hierarchical Regression Analysis for At-Risk Factors (n = 398)*

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$
Constant	1.55	0.06		1.42	0.13	
Overage	-0.15	0.23	-.03	-0.16	0.23	-.03
Promotion Eligible	0.78	0.16	.24**	0.91	0.20	.28**
Participant				0.16	0.15	.07
<i>R</i> <sup>2</sup>		.06			.06	
<i>F</i>		12.48**			1.18	

\* $p < .05$ . \*\* $p < .01$ .

## Additional Analysis

*English Language Learners (ELL)*

The population for the ELL students in the fifth quintile for the 2009-2010 Summer Transition Program was  $N = 22$ . This population had a gender makeup of 68.2% male ( $n = 15$ ) and 31.8% female ( $n = 5$ ). Ethnically, the fifth quintile ELL students for the Summer Transition Program were .05% Black ( $n = 1$ ), 90.1% Hispanic ( $n = 20$ ), and 0.5% Other ( $n = 1$ ). Students with disabilities (SWD) made up 18.2% ( $n = 4$ ), students who were not classified as SWD made up 81.8% ( $n = 18$ ). The free and reduced lunch (FRL) ELL male makeup for this population was 50.0% male ( $n = 11$ ) and 18.2% female ( $n = 4$ ). Those ELL students who were not two or more years overage in the fifth quintile was 95.5% ( $n = 21$ ) and those students who were two or more years overage was 4.5% ( $n = 1$ ). The fifth quintile ELL population had a not eligible for

promotion makeup of 100% ( $n = 22$ ) and eligible for promotion makeup of 0.0% ( $n = 0$ ). The average total days absent for the year for the ELL student population of the fifth quintile was 13.0 days.

The fifth quintile ELL participant population for the 2009-2010 Summer Transition Program was  $N = 9$  and this translates to a 40.1% participation rate for the fifth quintile ELL members. The gender makeup of the 2009-2010 at-risk ELL students in the fifth quintile that participated in the Summer Transition Program was 66.7% male ( $n = 6$ ) and 33.3% female ( $n = 3$ ). Ethnically the fifth quintile ELL participant group was 11.1% Black ( $n = 1$ ), 88.9% Hispanic ( $n = 8$ ), and 0.0% Other ( $n = 0$ ). Students with disabilities (SWD) made up 0.0% ( $n = 0$ ), students who were not classified as SWD made up 100.0% ( $n = 9$ ). The free and reduced lunch (FRL) male makeup for the ELL participant population was 55.6% ( $n = 5$ ) and 22.2% female ( $n = 2$ ). Those students who were not two or more years overage in the fifth quintile ELL participant population was 88.9% ( $n = 8$ ) and those students who were two or more years overage was 11.1% ( $n = 1$ ). The fifth quintile ELL participant population had a not eligible for promotion makeup of 100.0% ( $n = 9$ ) and eligible for promotion makeup of 0.0% ( $n = 0$ ). The average total days absent for the year for the ELL student population of the fifth quintile was 12.8 days.

In reviewing the ELL data only five of the fifth quintile ELL participants had grades for semester 1 and semester 2. The ELL participant students had gender makeup of male 60% ( $n = 3$ ) and female 40% ( $n = 2$ ). The ethnicity of this group was 80% Hispanic ( $n = 4$ ) and 20% Black ( $n = 1$ ). ELL participants Students with disabilities (SWD) made up 0% ( $n = 0$ ), students who were not classified as SWD made up 100% ( $n = 5$ ). The free and reduced lunch (FRL) male makeup for the ELL participant population with grades was 60.0% ( $n = 3$ ) and 40.0% female ( $n = 2$ ).

= 2). Those students who were not two or more years overage in the fifth quintile ELL participant population was 80.0% ( $n = 4$ ) and those students who were two or more years overage was 20.0% ( $n = 1$ ). The fifth quintile ELL participant with grades had a not eligible for promotion makeup of 100.0% ( $n = 5$ ) and eligible for promotion makeup of 0.0% ( $n = 0$ ). The average total days absent for the year for the ELL participant students with grades of the fifth quintile were 7.0 days.

The first semester grades were two Cs, one D, and an F. During the first semester the average GPA for these five students was 1.0 for Algebra I. During the second semester these five students each had grades of A for Algebra I and their second semester GPA was 4.0. The average total days absent for the year for these five ELL students was 7 days and their average GPA for the year in Algebra I was 2.5. The average total days absent for the year for the four ELL students that did not have grades for semester 1 and semester 2 was 20 days.

The fifth quintile ELL non-participant population for the 2009-2010 Summer Transition Program was  $N = 13$  and this translates to a 59.1% non-participation rate for ELL members of the fifth quintile group. The gender makeup of the 2009-2010 at-risk ELL students in the fifth quintile that did not participate in the Summer Transition Program was 69.2% male ( $n = 9$ ) and 30.8% female ( $n = 4$ ). The ethnic break out of the fifth quintile ELL non-participant group was 92.3% Hispanic ( $n = 12$ ), and 7.7% Other ( $n = 1$ ). Students with disabilities (SWD) made up 30.8% ( $n = 4$ ), students who were not classified as SWD made up 69.2% ( $n = 9$ ). The free and reduced lunch (FRL) male makeup for the ELL non-participant population was 46.2% ( $n = 6$ ) and 23.1% female ( $n = 3$ ). Those students who were not two or more years overage in the fifth quintile ELL non-participant population was 100% ( $n = 13$ ) and those students who were two or more years overage was 0.0% ( $n = 0$ ). The fifth quintile ELL non-participant population had a

not eligible for promotion makeup of 100% ( $n = 13$ ) and an eligible for promotion makeup of 0% ( $n = 0$ ). The non-participant ELL students of the fifth quintile group did not have grades for semester 1 and semester 2. The average total days absent for the year for the non-participant ELL students of the fifth quintile were 14 days. The demographic data for the fifth quintile ELL members are shown in Table 7. These findings are of educational interest and will be discussed in chapter 5.

Table 8

*Demographics for all Eligible Quintile 5 ELL Transition Students for 2009-2010*  
(*N* = 22)

	<u>Participant (<i>n</i> = 9)</u>		<u>Non-Participant (<i>n</i> = 13)</u>	
	<i>n</i>	%	<i>n</i>	%
<b>Gender</b>				
Female	3	33.3	4	30.8
Male	6	66.7	9	69.2
<b>Ethnicity</b>				
White	0	0.0	0	0
Black	1	11.1	0	0
Hispanic	8	88.9	12	92.3
Other	0	0.0	1	7.7
<b>SWD</b>				
No	9	100.0	9	69.2
Yes	0	0.0	4	30.8
<b>FRL</b>				
Female	2	22.2	2	15.4
Male	5	55.6	6	46.2
<b>Two or More Years Overage</b>				
No	8	88.9	13	100
Yes	1	11.1	0	0.0
<b>Eligible for Promotion</b>				
No	9	100.0	13	100
Yes	0	0.0	0	0.0

*Note.* FRL = free or reduced lunch. SWD = Students with disabilities. The ethnicities of Asian, Indian and Multiracial were combined to create an ethnic classification of Other to increase the number of students in the dataset who were not White, Black or Hispanic.



## Summary

The objective of this study was to determine if a relationship exists between the participation in a district Summer Transition Program and academic performance in Algebra I of at-risk students transitioning from middle school to high school. An introduction was given regarding the two groups to be studied, data sources, and statistical methods used to analyze the data. These statistical methods included propensity score analysis, descriptives, logistic regression, independent *t*-test, and multiple regression.

The results for research question one revealed that gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and Other], English language learners [ELL], two or more years overage, and students with disabilities [SWD] as a group do not help us in predicting Summer Transition Program participation. Results reported earlier from the Hosmer and Lemeshow Goodness of Fit Test indicated that the model used to address research question one is not a good fit and as a result no final conclusions can be drawn. Two student subgroups appear to have a higher probability of being used as predictors of participation and they are Black and free and reduced lunch (FRL), but future analysis should be performed to confirm their use as predictors. The majority of students in the Black student subgroup do not participate in the Summer Transition Program at a rate of 72% when compared to White participants. Students classified as FRL are two times as likely to participate in the Summer Transition Program. The subgroups of Hispanic, other ethnicities as compared to White, student with disabilities (SWD), and two or more years overage do not appear to be helpful in predicting participation in the Summer Transition Program, but when combined with the FRL indicator

participation in the Summer Transition Program may increase due to the effects of FRL. This is of educational interest and will be discussed in chapter 5.

Results from the second research question revealed that there was a statistically significant difference in overall Algebra I grade between participants and non-participants. Those who participated in the program showed a slightly lower mean Algebra I grade of 1.57 compared to the mean Algebra I grade for non-participants of 1.82 on this measure. Cohen's *d* indicates a small effect in participation explaining the differences between students on this measure. This is interesting because it tells us that participation in the Summer Transition Program is of little influence on participant's academic performance in Algebra I and the results showed that non-participants performed better academically in Algebra I with a mean grade of 1.82 compared to the participant group with an Algebra I mean grade of 1.57.

There were 61 students who were identified as at-risk and provided the option to participate in the Summer Transition Program. None of the students participated and thus were all classified as non-participants. When excluding these students, the average Algebra I grade was 1.42, slightly lower than Summer Transition Program participants Algebra I average of 1.57. Participating students earned grades of A, B and C at a higher percentage than their non-participating peers. In general, 55.3% of the participation group earned a grade of A, B, or C while 44.7% of the members in the non-participation group earned a grade of A, B, or C. This trend was true for most groups compared between the participant and non-participant groups, but when Blacks were compared it was found that in both groups 50% of Blacks earned grades of A, B, or C. This should be researched further to determine if the Black student subgroup is not improving academically when they participate in the Summer Transition Program. Keeping in mind that the model fit was not a good one, future research should be performed with a better

model fit to come to any final conclusions. These results are of educational importance and will be discussed in chapter 5.

The results for research question three revealed that Model 1 containing the independent variables of two or more years overage and eligibility for promotion was statistically significant, but that little variation in Algebra I grade was explained. Model 1 explained 5.9% of the variation in Algebra I grade meaning that 94.1% of the variation in Algebra I grade is explained by other variables. The variables of two or more years overage and eligibility for promotion have little influence on a student's Algebra I grade. Model 2, which added in participation in the Summer Transition Program while holding overage and promotion constant, did not produce a significant addition to the model. The addition of participation in the Summer Transition Program explained 6.2% of the variation in Algebra I grade leaving 93.8% of the variation to be explained by other variables. The final model, Algebra Grade =  $1.42 - 0.16*(\text{Overage}) + 0.91*(\text{Eligibility}) + 0.16*(\text{Participant})$ , was statistically significant and indicated a weak relationship between observed and model-predicted values of the dependent variable Algebra I grade. Recall, the results from research question two are asking whether eligibility for promotion should be used as an at-risk indicator due to the lack of participation of those students flagged as eligible for promotion. A weak association between the independent variables of at-risk factors of two or more years overage, eligibility for promotion and the dependent variable, Algebra I grade, was determined for the final model. This weak association indicated a weak relationship between Algebra I grade and at-risk factors of two or more years overage, eligibility for promotion, and participation in the Summer Transition Program. The results for research question three show that there is little, if any, relationship between Algebra I at-risk eligibility factors for participants and non-participants of the Summer Transition Program.

The additional analysis of English language learners (ELL) of the fifth quintile appears to indicate that the factors of time and attendance may play a role in ELL student academic success. During their 2009-2010 school year, five of the participating ELL students improved academically in Algebra I. The grades for these students during the first semester were two Cs, one D and two Fs, but each of these same students earned an A in Algebra I in semester two. When attendance was analyzed it is of interest to note that average days absent for the year was 13.0 days for all the ELL students ( $n = 22$ ), 12.8 days for all participating ELL students ( $n=9$ ), 7.0 days for participating ELL students that had grades for both semester one and two ( $n = 5$ ), and 20.0 days for participating students without grades in either semester one and two ( $n = 4$ ). Chapter 5 will provide a final conclusion of this study and is made up of an introduction, summary, discussion, implications, recommendations, and conclusions.

## **CHAPTER 5: DISCUSSION**

### **Introduction**

The purpose of this study was to examine participants and non-participants of a district Summer Transition program for at-risk students transitioning from the eighth grade to the ninth grade. The first research question attempted to determine if a relationship exists between the participation rate of the Summer Transition Program and student subgroups. The second research question tried to investigate to what extent is there a mean difference in academic success in Algebra I between participants of the Summer Transition program and non-participants. The third research question tested to what extent is there a relationship between at-risk factors of eligibility for participants and non-participants of the Summer Transition Program and academic success in Algebra I. This chapter will first summarize this study followed by a discussion of the findings, implications for practice, recommendations for future research, and study conclusions.

### **Summary of Study**

Students identified as at-risk are in need of interventions to increase their overall graduation rate. Education leaders in the United States are seeking out ideas to help improve high school graduation rates. A new experience for eighth grade students transitioning to the ninth grade is the requirement to pass their academic courses and this new experience makes the ninth grade extremely important in setting the rate of academic success for these transitioning students (Fulk, 2003). Transitioning students are finding that the most difficult courses in high school are not optional when it comes to graduation (Smith, Akos, Lim & Wiley, 2008). The odds of graduating from high school are not in favor of those students who are Black, Hispanic,

Native American, come from a low-socioeconomic status or who have a parent who has dropped out of high school (Reschly & Christenson, 2006).

If a student earns the number of credits needed to be promoted to the tenth grade and has not failed more than one core academic class, that student is on track to graduate (Allensworth & Easton, 2005). Transitioning eighth to ninth grade students have higher rates of absenteeism, larger share of failing classes and more discipline referrals than their upperclassman peers (Fritzer & Herbst, 1996). Repeating ninth graders, as concluded in a John Hopkins University study, who are in school systems with high dropout rates, have an 85% probability of not graduating (Kennelly & Monrad, 2007a).

At first glance, the results from this study indicate that the Summer Transition Program administered by the school district was not meeting the objective of improving the academic performance of participating students when compared to non-participating students. This was seen when participating students of the Summer Transition Program ended the 2009-2010 school year performing less successfully academically as their non-participating schoolmates in Algebra I, but when the eligible for promotion students were discounted a different picture emerged with regards to the impact of the Summer Transition Program. The participant group had a slightly higher Algebra I average of 1.57 as compared to the non-participant Algebra I average of 1.42. The difference is small but does signify a positive effect for participating students. This difference in average along with the participant students earning a higher percentage of grade A, B and C at 55.3% compared to the non-participant percentage of 44.7% denotes that the Summer Transition Program did positively impact participating students. Unfortunately, the Black participants of the Summer Transition Program did not show any difference in their Algebra I academic performance when compared to the non-participant group. In both the participant and

non-participant groups 50% earned a grade of A, B or C and this may indicate that Black participants of the Summer Transition Program are not improving academically and additional research should be performed with a better model fit to confirm this result. In reviewing all the results, there does appear to be a positive effect on students that participate in the Summer Transition Program, but the at-risk students in the Black subgroup are not showing any gain in their academic performance. Future studies should help in identifying areas of strength and for growth in the school district's Summer Transition Program.

### Discussion of Findings

#### *Research Question One*

*What is the relationship of participation rate in the Summer Transition Program to membership in student subgroups? (gender, socioeconomic status, ethnicity [White, Black, Hispanic, Asian, and Other], English language learners [ELL], two or more years overage, students with disabilities [SWD]).*

Half a million high school students leave high school each year and this number has been steady for the past 30 years (Heckman & LaFontaine, 2007; Warren & Halpern-Manners, 2007). Fewer than 60% of high school students will finish their high school studies in 4 years or less (Amos, 2008). Students graduating at an even lower percentage rate are Black, Hispanic; English language learners; students with disabilities; or come from low income families graduate at an even lower percentage rate (Amos, 2008; KewalRamani, Gilbertson, Fox & Provasnik, 2007; Orfield, Losen, Wald & Swanson, 2004).

Black students were 72% as likely not to participate in the Summer Transition Program. Students of Black descent made-up 29% of the eligible students for the Summer Transition

Program, but only 14% of these students participated in the Summer Transition Program. One would expect a higher level of representation of Black students in the Summer Transition Program since they made up 29% of the eligible population. Student subgroups' graduation rates for the 2008-2009 school year were 71.1% for White, 59.8% for Black, 66.9% for Hispanic, 94.0% for Asian/Pacific and 68.4% for American Indian/Alaska Native (National Center for Education Statistics, 2011). The student subgroup dropout rates by race were 0.2% for Whites, 1.2% for Black, 0.5% for Hispanic, 0% for both the Asian/Pacific and American Indian/Alaska native groups (Florida Department of Education, 2011b). Looking closely at these dropout rates one can see that the dropout rate for Black students is six times the dropout rate for Whites and Blacks graduate from high school at a lower percentage rate (59.8%) than any other subgroup. The question is raised as to why did students in the Black subgroup choose not participate in the Summer Transition Program. Based on the cited research in this study there is a strong need for intervention with the Black student to improve their academic success and rate of graduation.

The free and reduced lunch (FRL) indicator is used to identify those students whose socio-economic status is low. Sixty-six percent of eligible FRL students participated in the Summer Transition Program. Students identified as minority and of low socioeconomic status have a 50-50 chance of graduating from high school (Herlihy & Quint, 2006; Swanson, 2004). Students receiving FRL services are twice as likely to participate in the Summer Transition Program. Students are six times as likely to drop out of high school if they come from a low income family (America's Promise Alliance, n.d.). With the passing of time, the number of FRL students participating in the Summer Transition Program will grow in an effort to increase their academic success. The majority of student subgroup indicators are not good predictors of student participation in the Summer Transition Program. The two subgroups of Black (72% are



as likely not to participate) and FRL (two times as likely to participate) are good predictors of students participation in the Summer School Program.

The model used to address research question one was determined not to be a good fit, but the results may still have educational value. Black students were found not likely to participate and an objective of the school district should be to identify the factors that are causing Black students to choose not to participate in the Summer Transition Program. Once these factors are identified the district will need to make attempts to minimize the influential effects of these factors. This with a more effective Summer Transition Program should help to decrease dropout rate and increase the graduation rate for the school district's Black subgroup.

#### *Research Question Two*

*To what extent does academic performance in Algebra I correlate to participation in the Summer Transition Program during the regular school year when compared to non-participants?*

An increase in academic stress is brought on by the transition from middle school to high school (Hussong & Stein, 2007). The results of a study that examined the decrease in academic performance indicated that a student's academic performance is decreased when they transition from one school to another (Alspaugh, 1998).

Research question two results were not expected and further analysis found interesting results. The students that participated in the Summer Transition Program had a lower Algebra I grade mean of 1.57 while the non-participants had grade mean of 1.82 in Algebra I. Participating in the Summer Transition Program appears to have negatively impacted the participating students academically. Core courses in the subjects of mathematics, science,

English, or social studies that are failed by transitioning students increases their risk of not finishing high school (Allensworth & Easton, 2005). When excluding students that were eligible for promotion, there was a higher percentage of participants in the Summer Transition Program that earned passing Algebra I grades (i.e., A, B, C). This tells us that students are experiencing positive results in their academic performance when they participate in the Summer Transition Program, but Black students are not sharing in this experience and this may be because of effects of other variables such as free and reduced lunch. Additional analysis will need to be done to determine if outside factors played a role in the results. These results indicate there is little mean difference in Algebra I grade between the participant and non-participant groups, but that overall grade performance is impacted resulting in improved academic achievement for participants of the Summer Transition Program. This tells us that participating in the Summer Transition Program does have positive effects and that a reevaluation of the eligible for promotion variable as an at-risk indicator is in order. With respect to Black students, these results indicate that the application of the Summer Transition Program needs to be reviewed to see why it did not have a positive effect on the Black participants.

### *Research Question Three*

*To what extent is there a relationship between Algebra I and at-risk eligibility factors for participants and non-participants of the Summer Transition Program? (not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage, non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics).*

Characteristics that indicate that a student may drop out of high school are behavior issues, retention, loss of interest/motivation, and core subject failures (Allensworth & Easton, 2007; Kennelly & Monrad, 2007b). A characteristic that has been listed as leading students to drop out of high school are failing the core classes of science, mathematics, English and social studies (Allensworth & Easton, 2005; Balfanz, Herzog & MacIver, 2007; Neild & Balfanz, 2006).

The results for research question three indicated that the at-risk factors of two or more years overage and eligibility for promotion explained only 5.9% of the variation in the Algebra I grade. This tells us that 94.1% of the variation in the Algebra I grade was explained by other variables. When participation in the Summer Transition Program was added it explained only 6.2% of the variation in the Algebra I grade. A second interpretation is that 93.8% of the variation is explained by other variables. The last model displayed a weak association with the at-risk factors of two or more years overage, eligibility for promotion and the dependent variable Algebra I grade. The at-risk factors of failure of one or more academic courses, and non-proficient scores on the Florida Comprehensive Assessment Test (FCAT) in reading or mathematics were not included in Model 1, Model 2, and the final model due to the unavailability of this data.

#### *Additional Analysis English Language Learners*

The data indicated that time and attendance may be a factor in the academic success of the English language learner (ELL) student. The variable of time as playing a role in the academic success of ELL students was indicated by those students who had received a grade of C, D and F during their first semester, but then during their second semester these same students

received grades of A. This could indicate that these students, with time, became more assimilated to the culture and the English language and this helped them improve in their academics.

Ninth grade students who had a rate of attendance below 70% did not graduate from high school (Neild et al., 2007). In reviewing the data, attendance seems to be a factor in improved academic success of the ELL student. The participating ELL students who received a grade of A during the second semester had average days absent value of seven days while those students that did not have a grade reported for Algebra I had average days absent value of twenty days.

The number of ELL students contained within the Quintile 5 population was extremely low with a population of twenty-two. This freshman ELL population for a school district that is not considered to be a small district is small for this district. This is something the school district may wish to address.

#### Implications for Practice

Taking into account the challenges faced with the model fit for this study, the results of this study appear to indicate that the implementation of the Summer Transition Program did not yield the positive results that were desired, but this may be the result of having an at-risk indicator (eligible for promotion) that is not really an indicator of at-risk. A great deal of money, via a grant of \$358,000 was used to fund this program and a Return on Investment (ROI) calls for an increase in academic performance for all participants. Three areas that were looked at for this research study are 1) student subgroups as predictors of participation; 2) academic success in Algebra I when compared to participants and non-participants of the Summer Transition Program; and 3) at-risk indicator relationship with Algebra I academic success.

The two at-risk indicators that may be of use to the district were Black and free and reduced lunch (FRL). The study results appear to show that the Black indicator told us that a Black student was 28% as likely to participate in the Summer Transition Program as a White student. This is an area that the district should focus on with the intent of increasing the participation rate for Blacks. The reasoning for why Blacks do not participate in the Summer Transition Program needs to be investigated and identified and may be due to effects of other at-risk variables. The school district needs to identify the factors causing Blacks to not participant in the Summer Transition Program. During the 2008-2009 school year the Black graduation rate was 59.8% the lowest of all the ethnic groups. Florida subgroup graduation rate for the 2008-2009 school year were 71.1% for White, 59.8% for Black, 66.9% for Hispanic, 94.0% for Asian/Pacific and 68.4% for American Indian/Alaska Native (National Center for Education Statistics, 2011). The school district believes in the practice of continuous improvement and should use this practice to review the criteria used to evaluate how their middle schools identify, notify and motivate their Black population to participate in their Summer Transition Program.

“Productive transition programs attend to those students who are likely to have greatest difficulty with systemic transitions: girls, students with behavior problems, low achievers, and minority or low socioeconomic status students” (Cauley & Jovanovich, 2006, p. 18). The data seems to indicate that students that use free and reduced lunch (FRL) are two times as likely to participate in the Summer Transition Program which tells the school district that there is a strong need for support services for this subgroup. The school district may want to use the FRL indicator to identify at-risk students during their elementary school years which would enable the school district to provide academic, social, and health services early during an at-risk student’s school career.

The Summer Transition Program appears not to be effective in improving the academic success of its participants as witnessed by the data indicating that the non-participants performed better academically in Algebra I than did the participants, but when the eligible for promotion at-risk indicator was discounted the overall effects of the Summer Transition Program were positive for most participants except for Black at-risk students. These results are not conclusive due to the lack of good model fit. The school district may want to review how the Summer Transition Program was actually implemented at each of the schools and whether there was consistency with program delivery. In addition, a review should be conducted to determine why participating at-risk Black students appear not to experience a positive growth in their Algebra I performance. Was the proper plan format of the Summer Transition Program followed? Is the transition program based on research? Transition programs that are productive involve all stakeholders, practice continuous planning, are all embracing, all aware and focus on the students having the most need for support when transitioning from eighth grade to ninth grade (Cauley & Jovanovich, 2006).

A productive transition system should involve continuous planning among teams of teachers and school leaders. Communication between the two levels of schools should focus on the rising expectations for students, the necessary amount of academic preparation, and the high expectations and additional help that low-performing students may require to meet the standards. The transition committee should meet regularly to review, evaluate, and revise the program. (Cauley & Jovanovich, 2006, p. 18)

This study determined that there was little relationship between at-risk eligibility factors and Algebra I for participants and non-participants of the Summer Transition Program. Loss of interest/motivation, behavior issues, core subject failures, and retention are the four at-risk

variables that research has consistently connected to a student not finishing high school (Allensworth & Easton, 2007; Kennelly & Monrad, 2007b). The school district has the variables of not eligible for promotion from eighth to ninth grade due to not earning a 2.0 GPA, failure of one or more academic courses, two or more years overage and non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in Reading or Mathematics. The data for the at-risk variables failure of one or more academic courses, have been retained two or more times, and non-proficient scores on the Florida Comprehensive Assessment Test [FCAT] in reading or mathematics were not available. In addition, as described in chapter 3, the student's age when entering high school on August 1, 2009 was used to determine if they had been retained two or more times with those students 16 years of age or older being labeled as at-risk and being labeled two or more years overage. The school district should investigate the reasoning behind having these variables as the indicators for at-risk and the data not being available for study. In addition, these variables allow for those students eligible for promotion but having one of the other at-risk variables making them eligible for the Summer Transition Program. The data indicated that out of those eligible for promotion but still qualifying for the Summer Transition Program because of one of the other at-risk variables, that none of them opted to participate in the Summer Transition Program. The school district may want to investigate whether a student eligible for promotion should be classified as at-risk since it appears none of these students elect to take part in the Summer Transition Program.

In the analysis performed on English language learners (ELL) the data revealed educationally useful information for all students. Gleason & Dynarski (2002) said that not finishing high school is strongly connected to a student not attending class or not attending school. When a student is not performing well academically the outcome may be an increased

feeling of disconnect from the student's school. This increased disconnection particularly for a transitioning student increases the probability of that student dropping out of high school (Holland & Mazzoli, 2001).

The school district did not have attendance as an at-risk variable. This at-risk variable may be used to identify those students transitioning from middle school to high school as at-risk if their attendance falls below a certain range. Middle school students whose percentage of attendance falls below 80% have a 22% probability that they will graduate (Neild & Balfanz, 2006). The school district may want to use attendance as an indicator to identify at-risk students during their middle school years which would enable the school district to plan for and address the needs of these at-risk students at an earlier time period.

#### Recommendations for Future Research

- 1) A better model fit needs to be identified via additional analyses of the data which include a full complement of variables. This should help in providing for stronger results leading to more conclusive interpretations.
- 2) Black students opting not to participate in the school district's at-risk program should be analyzed to determine the variables that may be influencing the participation of Black at-risk students.
- 3) The impact of the at-risk variable of free and reduced lunch (FRL) on the participation rate of student subgroups in the Summer Transition Program should be analyzed.
- 4) Using FRL in elementary school to predict eligibility for the at-risk program when transitioning to high school should be researched.



- 5) Academic performance in English and Biology should be studied for participants and non-participants of the Summer Transition Program.
- 6) Research should be done to identify best practices in administering the Summer Transition Program.
- 7) Identification of at-risk indicators in middle school which influence a transitioning student's high school experience should be researched.
  - This is an important issue resulting from the lack of at-risk information on the school district's database. In addition, the at-risk indicator of eligible for promotion needs to be reviewed since it no longer seems to be a valid indicator for the at-risk program.
- 8) Research should be performed to determine if there a relationship between time and the academic success of the at-risk ELL student.
- 9) The effect on attendance should be studied for those participating in the Summer Transition Program compared to those who did not participate.
- 10) The effect on student discipline should be studied for those who participated in the Summer Transition Program compared to those who did not participate.

## Conclusions

The findings of this study have added to earlier research in the area of transition programs and their effect on academic success for at-risk students transitioning from middle school to high school. A Central Florida school district's Summer Transition Program was the object of this study. This investigation concluded that the school district's Summer Transition

Program has the potential for growth, additional review of the Summer Transition Program should be conducted to identify the effective and non-effective parts of the program, and a study of the different high school sites within the school district should be performed to identify best practices.

This is one of three studies that have been conducted on the school district's Summer Transition Program. Researcher 1 examined student perceptions of factors that have helped the students stay on track towards graduation. Researcher 2(author) examined to what extent, if any, participation in the Summer Transition Program had on the academic success in Algebra I and if there is a relationship with participation in the Teach Forward preparedness program and the academic success by student subgroups. Researcher 3 examined to what extent, if any, participation in the Summer Transition Program had on graduation rate. The results from Researcher 3's study complement Researcher 2's study by providing insight into the academic performance and on-track graduation rate over a three year period for the participants and non-participants who joined the district's incoming ninth grade class in August of 2009. The Summer Transition Program started in August of 2009 and the objective of the three studies was to provide an overall view of this first transition group and provide recommendations for the improvement of the Summer Transition Program for the benefit of current and future Summer Transition Program participants.

Educators must always strive for continuous process improvement of teaching methods and programs. Today's students are diverse and come with different backgrounds and levels of skill. At-risk students in particular require additional support and encouragement to help them reach their full potential academically, and socially. An effective transition program can help at-risk students reach the ultimate goal of graduation. The school district supported the three

studies of their Summer Transition Program with the objective of using the findings from all three studies as a formative tool to see where the Summer Transition Program is in meeting its educational objectives and those areas where it is not meeting the educational objectives. The information from these studies was useful to the school district in planning the continued improvement of the Summer Transition Program so that they could better serve their at-risk population.

**APPENDIX A**  
**SCHOOL DISTRICT IRB APPROVAL LETTER:**



██████████  
*Superintendent*



Phone: ██████████  
Fax: ██████████

**SCHOOL BOARD**

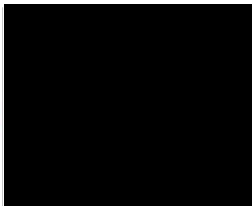
██████████  
*Chairman*

██████████  
*Vice Chairman*

██████████  
*Board Member*

██████████  
*Board Member*

██████████  
*Board Member*



*"A" Rated  
Academically  
High-Performing  
School District*

*Visit Our Web Site*  
██████████

February 28, 2013

Mr. Jose A. Sanchez  
██████████

Dear Mr. Sanchez,

I am in receipt of the proposal and supplemental information that you submitted for permission to conduct research in the ██████████ Public Schools. After review of these documents, it has been determined that you are granted permission to conduct the study described in these documents under the conditions described herein.

Please forward a summary of your project to my office upon completion.  
Good Luck!

Sincerely,



██████████  
Deputy Superintendent



**APPENDIX B**  
**CITI COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE**

## Human Research Curriculum Completion Report

Printed on 11/18/2010

**Learner:** Jose Sanchez (username: sancheja)

**Institution:** University of Central Florida

**Contact** Department: Education

**Information** Phone: [REDACTED]

Email: [REDACTED]

### Group 2.Social / Behavioral Research Investigators and Key Personnel:

#### Stage 1. Basic Course Passed on 11/18/10 (Ref # 5244673)

Required Modules	Date Completed	Score
Introduction	11/15/10	no quiz
History and Ethical Principles - SBR	11/18/10	4/4 (100%)
Defining Research with Human Subjects - SBR	11/18/10	5/5 (100%)
The Regulations and The Social and Behavioral Sciences - SBR	11/18/10	5/5 (100%)
Assessing Risk in Social and Behavioral Sciences - SBR	11/18/10	5/5 (100%)
Informed Consent - SBR	11/18/10	5/5 (100%)
Privacy and Confidentiality - SBR	11/18/10	5/5 (100%)
Research with Prisoners - SBR	11/18/10	4/4 (100%)
Research with Children - SBR	11/18/10	4/4 (100%)
Research in Public Elementary and Secondary Schools - SBR	11/18/10	4/4 (100%)
International Research - SBR	11/18/10	3/3 (100%)

Internet Research - SBR	11/18/10	4/4 (100%)
Research and HIPAA Privacy Protections	11/18/10	4/6 (67%)
Conflicts of Interest in Research Involving Human Subjects	11/18/10	2/2 (100%)
UCF	11/18/10	no quiz

**For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.**

Paul Braunschweiger Ph.D.  
 Professor, University of Miami  
 Director Office of Research Education  
 CITI Course Coordinator



**APPENDIX C**  
**IRB OUTCOME LETTER**



University of Central Florida  
Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

From : **UCF Institutional Review Board #1  
FWA00000351, IRB00001138**

To : **Jose A. Sanchez**

Date : **July 20, 2012**

Dear Researcher:

On 7/20/2012 the IRB determined that the following proposed activity is not human research as defined by DHHS regulations at 45 CFR 46 or FDA regulations at 21 CFR 50/56:

Type of Review: Not Human Research Determination  
Project Title: THE RELATIONSHIP OF PARTICIPATION  
IN A SUMMER TRANSITION PROGRAM  
FOR AT-RISK NINTH GRADE STUDENTS  
AND THEIR PERFORMANCE IN CORE  
COURSES  
Investigator: Jose A Sanchez  
IRB ID: SBE-12-08578  
Funding Agency:  
Grant Title:  
Research ID: N/A

University of Central Florida IRB review and approval is not required. This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are to be made and there are questions about whether these activities are research involving human subjects, please contact the IRB office to discuss the proposed changes.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is

signed by: Signature applied by Joanne Muratori on 07/20/2012 04:12:33 PM EDT

A handwritten signature in black ink that reads "Joanne Muratori".

IRB Coordinator

## LIST OF REFERENCES

- Agresti, A. (2002). *Categorical data analysis / Alan Agresti*. New York : Wiley-Interscience, c2002.
- Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist*, 44(4), 709-716.  
doi:10.1037/0003-066X.44.4.709
- Akos, P. & Galassi, J.P. (2004). Middle and high school transitions as viewed by students, parents, and teachers. *Professional School Counseling*. 7(4), 212-221.
- Alexander, K. L., Entwisle, D. R., & Horsey, C. (1997). From first grade forward: Early foundations of high school dropout. *Sociology of Education*, 70, 87-107. Retrieved from <http://www.jstor.org.ezproxy.lib.ucf.edu/stable/pdfplus/2673158.pdf>
- Algebra I. (n.d.), *Seminole County Public Schools*. Retrieved from <http://www.scps.k12.fl.us/schools.aspx>
- Allensworth, E., & Easton, J.Q. (2005). *The On-track indicator as a predictor of high school graduation*. Chicago. Consortium of Chicago School Research.
- Allensworth, E. M., & Easton, J. Q. (2007). *What matters for staying on-track and graduating in Chicago Public Schools: A closer look at course grades, failures, and attendance*. Chicago, II: Consortium on Chicago School Research at the University of Chicago.
- Alliance for Excellent Education. (2006). *High school dropouts cost the U.S. billions in lost wages and taxes, according to Alliance for Excellent Education*. Retrieved from [http://www.all4ed.org/press\\_room/press\\_releases/03012006](http://www.all4ed.org/press_room/press_releases/03012006)
- Alliance for Excellent Education. (2009). *Understanding high school graduation rates in florida*. Retrieved from [http://www.all4ed.org/files/Florida\\_wc.pdf](http://www.all4ed.org/files/Florida_wc.pdf)
- Alsbaugh, J. W. (1998). Achievement loss associated with the transition to middle school and

- high school. *The Journal of Educational Research*, 92, 20-25.
- America's Promise Alliance. (n.d.). Retrieved from <http://www.americaspromise.org>
- Amos, J. (2008). *Dropouts, Diplomas, and Dollars: U.S. High Schools and the Nation's Economy*. Washington, DC: Alliance for Excellent Education.
- AT&T Foundation (2008). *AT&T High School Success Special Grants Program*. Unpublished manuscript.
- AT&T Project Narrative (2008). *AT&T High School Success Special Grants Program Application*. Unpublished manuscript.
- AVID. (2012). *What is AVID?* Retrieved from [http://www.avid.org/abo\\_whatisavid.html](http://www.avid.org/abo_whatisavid.html)
- AVID Region VI. (2010). *11 Essentials at a glance and non-negotiables*. Retrieved from [http://www.avidregion6.org/new/useful\\_docs.aspx](http://www.avidregion6.org/new/useful_docs.aspx)
- Balfanz, R, Herzog, L., & MacIver, D. J., (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early identification and effective interventions. *Educational Psychologist*, 42 (4), 223-235.
- Balfanz, R., Horning-Fox, J., Bridgeland, J., & McNaught, M. (2009). *Grad nation: A guidebook to help communities tackle the dropout crisis*. Washington, DC: America's Promise Alliance.
- Bartholomew, K. & Shaver, P.R. (1998) *Measures of attachment: Do they converge?* In J.A. Simpson & W.S. Rholes (Eds.), *Attachment theory and close relationships* (pp.25-45). New York: Guilford Press.
- Berman, W.H., & Sperling, M.B. (1994). *The structure and function of adult attachment*. In W.H. Berman & M.B. Sperling (Eds), *Attachments in adults: Clinical and developmental perspectives* (pp. 1-30). New York: Guilford Press.

- Bey, T. M., Holmes, C. T., & Association of, T. E. (1990). *Mentoring. developing successful new teachers.*
- Biology. (n.d.), *Seminole county public schools.* Retrieved from <http://www.scps.k12.us/schools.aspx>
- Blakemore, S. J. (2008). Developing the social brain during adolescence. *The Quarterly Journal of Experimental Psychology*, *61*(1), 40-49
- Bonny, A.E., Britto, M.T., Klostermann, B.K. Hornung, R.W., & Slap, G.B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics*, *106*(9), 1017-1021.
- Bowlby, J. (1980). *Attachment and loss.* New York, NY US: Basic Books.
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* New York, NY US: Basic Books.
- Bry, B. H. (1996). Psychological approaches to prevention. In R. J. DeGrandpre (Ed.), *Drug policy and human nature: Psychological perspectives on the prevention, management, and treatment of illicit drug abuse.* (pp. 55-76). New York, NY US: Plenum Press.
- Bureau of Labor Statistics, U.S. Department of Labor, *2010–2011 Occupational outlook handbook.*
- Butts, M. J., & Cruzeiro, P. A. (2005). Student perceptions of factors leading to an effective transition from eighth to ninth grade. *American Secondary Education*, *34*(1), 70-82.
- Cadwallader, T. W., Cairns, B. D., & Farmer, T. W. (2003). The transition to high school: A prodigal analysis of developmental pathways. *New Directions for Child & Adolescent Development*, *2003*(101), 63-74.
- Campbell, D. E., & Campbell, T. A. (2000). The mentoring relationship: Differing perceptions of benefits. *College Student Journal*, *34*(4), 516.

- Campbell, T. A., & Campbell, D. E. (1997). Faculty/Student Mentor Program: Effects on academic performance and retention. *Research in Higher Education*, 38(6), 727-742.
- Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: Effects on social adjustment and alcohol use. *Journal of Consulting and Clinical Psychology*, 60(1), 56-63.  
doi:10.1037/0022-006X.60.1.56
- Cauley, K., & Jovanovich, D. (2006). Developing an effective transition program for students entering middle school or high school. *Clearing House: A Journal of Educational Strategies, issues and Ideas*, 80 (1), 15-25.
- Centre for Neuro Skills. (n.d.), Retrieved from <http://www.neuroskills.com/brain-injury/frontal-lobes.php>
- Centre for the Study of Living Standards (2007). *The potential contribution of/Aboriginal Canadians to labourforce, employment, productivity and output growth in Canada. 2001-2007*. Retrieved from <http://www.csls.ca/reports/csls2007-04.pdf>
- Chapman, M. & Sawyer, J. (2001). Bridging the gap for students at risk of school failure: A social work-initiated middle to high school transition program. *Children and School*, 23, 235-241.
- Clark, C., & Hunley, A. (2007). Freshman academies on a shoestring. *Principal Leadership*, 7(7), 41. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=EJ768209&site=eds-live&scope=site;>  
<http://www.principals.org/KnowledgeCenter/Publications.aspx>
- Cooper, R. & Lieu, D. D. (2007). The structure and climate of information pathways:

- Rethinking opportunity to learn in urban high schools during the ninth-grade transition. *The High School Journal*, 92 (1), 43-56.
- Creemers, B.M., Kyriakides, L., & Sammons, P. (2010). *Methodological advances in educational effectiveness research* / Bert P.M. Creemers, Leonidas Kyriakides, and Pam Sammons. Milton Park, Abingdon, Oxon; New York: Routledge, c2010.
- Cuijpers, P. (2002). Peer-led and adult-led school drug prevention: A meta-analytic comparison. *Journal of Drug Education*, 32(2), 107-119.
- Curtis, T., & Hansen-Schwoebel, K. (1999). *Big Brothers Big Sisters school based mentoring: Evaluation summary of five pilot programs*. Philadelphia: Big Brothers Big Sisters of America.
- Cushman, K. (2006). Help us make the 9th grade transition. *Educational Leadership*, 63(7), 47-52.
- Dahl, R. (2002). Pathways to adolescent health: Sleep regulation and behavior. *Journal of Adolescent Health*, 31(6S), 175-184.
- Dappen, L., & Isernhagen, J. C. (2006). Urban and nonurban schools: Examination of a statewide student mentoring program. *Urban Education*, 41(2), 151-168.
- Dawson, P. & Guare, R. (2009). Executive skills: The hidden curriculum. *Principal Leadership: High School Edition*, 9(7), 10-14.
- Dedmond, R. M. (2008). Launching students into their decade of transition. *Techniques Connecting Education & Careers*, 83(4), 14-19.
- DuBois, D.L., & Silverthorn, N. (2005). Natural mentoring relationship and adolescent health: Evidence from a national study. *American Journal of Public Health*, 95(3), 518-524.
- DuFour, R., DuFour, R., Eaker, R. & Karhanek, G. (2004). *Whatever it takes: How professional*

*learning communities respond when kids don't learn*. Bloomington, IN: National Educational Service.

English I. (n.d.), *Seminole county public schools*. Retrieved from

<http://www.scps.k12.fl.us/schools.aspx>

Ennett, S. T., Ringwalt, C. L., Thorne, J., Rohrbach, L. A., Vincus, A., Simons-Rudolph, A., & Jones, S. (2003). A comparison of current practice in school-based substance use prevention programs with meta-analysis findings. *Prevention Science, 4*(1), 1-14. doi:10.1023/A:1021777109369

Ensor, K. L. (2009). Improving developmental college counseling programs: Utilizing the advancement via individual determination (AVID) to motivate at-risk students. *Journal of College Admission, (205)*, 16-21. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=EJ867959&site=eds-live&scope=site>

Ethnicity. (n.d.). Merriam-Webster.com. Retrieved from

<http://www.merriam-webster.com/dictionary/ethnicity>

Epstein, J. A., Griffin, K. W., & Botvin, G. J. (2002). Positive impact of competence skills and psychological wellness in protecting inner-city adolescents from alcohol use. *Prevention Science, 3*(2), 95-104. doi:10.1023/A:1015479216401

English Language Learners (ELL). (n.d.). ED.gov. Retrieved from

<http://www2.ed.gov/policy/elsec/leg/esea02/pg107.html#sec9101>

Eugster, E. A., Palmert, M. R. (2006). Precocious puberty. *The Journal of Clinical Endocrinology & Metabolism, 91*(9), 1. Retrieved from <http://jcem.endojournals.org/content/91/9/0.1.full.pdf>



- Farley, E., & Neild, R. C. (2008). Within-school variation in teacher quality: The case of ninth grade. *American Journal of Education*, 114(3), 271-305.
- Flaxman, E., Ascher, C., & Columbia Univ, New York, NY Inst for Urban and, Minority Education. (1992). *Mentoring in action: The efforts of programs in new york city*.
- Florida Department of Education (2007), Retrieved from *Florida department of education DOE information database requirements*.  
[http://www.fldoe.org/eias/dataweb/database\\_0607/st231\\_1.pdf](http://www.fldoe.org/eias/dataweb/database_0607/st231_1.pdf)
- Florida Department of Education (2011a). *2011 Guide to calculating school grades: Technical assistance paper*. Retrieved from  
<http://schoolgrades.fldoe.org/pdf/1011/SchoolGradesTAP2011.pdf>
- Florida Department of Education (2011b). *Florida public high school graduation rates, 2010-11*. Retrieved from <http://www.fldoe.org/eias/eiaspubs/word/GradRate-1011.doc>
- Florida Department of Education (2012). *Certificate of Completion*. Retrieved from  
[http://www.fldoe.org/eias/dataweb/database\\_1112/108125.pdf](http://www.fldoe.org/eias/dataweb/database_1112/108125.pdf)
- Floyd, N., & Office of Educational Research and Improvement (ED), Washington, DC Office, of Research. (1993). *Mentoring. education research consumer guide, number 7*.
- Freedman, M. (1993). *The kindness of strangers: Adult mentors, urban youth, and the new voluntarism*. San Francisco, CA US: Jossey-Bass.
- Fritzer, P. J. & Herber, P. S. (1996). 'Make yourself at home ': The ' house ' concept in ninth-grade transition. *American Secondary Education*. 25(2), 7-9.
- Fulk, B. (2003). Concerns about ninth grade students' poor academic performance: One schools action plan. *American Secondary Education*. 31(2), 8-26.
- Georgiou, S. N., Demetriou, A. P., & Stavrinides, P. (2008). Attachment style and mentoring

- relationships in adolescence. *Educational Psychology*, 28(6), 603-614.  
doi:10.1080/01443410801982517
- Gleason, P., & Dynarski, M. (2002). Do we know whom to serve? Issues in using risk factors to identify dropouts. *Journal of Education for Students Placed at Risk*, 7 (1), 25-41.
- Gottfredson, D. C., Gerstenblith, S. A., Soulé, D. A., Womer, S. C., & Lu, S. (2004). Do after school programs reduce delinquency? *Prevention Science*, 5(4), 253-266.  
doi:10.1023/B:PREV.0000045359.41696.02
- Greenberg, M. T. (2004). Current and future challenges in school-based prevention: The researcher perspective. *Prevention Science*, 5(1), 5-13.  
doi:10.1023/B:PREV.0000013976.84939.55.
- Griffen, S., Newman, B., Newman, P., O'Connor, K., Spas, J. (2007). The relationship of social support to depressive symptoms during the transition to high school. *Adolescence*, 42(167), 441-59.
- Grossman, J. B., & Tierney, J. P. (1998). Does mentoring work? *Evaluation Review*, 22(3), 403.
- Grossman, J. B., & Rhodes, J. E. (2002). The test of time: Predictors and effects of duration in youth mentoring relationships. *American Journal of Community Psychology*, 30(2), 199-219. doi:10.1023/A:1014680827552
- Hamre, B. K., & Pianta, R. C. (2001). Early Teacher–Child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72(2), 625.
- Haney, W., Madaus, G., Abrams, L., Wheelock, A., Miao, J., & Gruia, I. (2004). The national board on educational testing and public policy: The education pipeline in the United States  
1970-2000 (Lynch School of Education, Boston College). Retrieved from

<http://www.bc.edu/research/nbetpp/statements/nbr3.pdf>

Haney, W., Abrams, L., Madaus, G., Wheelock., A., Miao, J., & Gruia, I. (2005). The education pipeline in the United States, 1970-2000. In L. Weis & M. Fine (Eds.), *Beyond silenced voices: Class, race, and gender in United States schools* (pp. 21-45). Albany: State University of New York Press.

Hardy, L. (2006). A fresh start. *American School Board Journal*, 193(7), 20-23. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=aph&AN=21164049&site=eds-live&scope=site>

Harlow, C. W. (2003). *Education and correctional populations*. Bureau of Justice, Washington D.C., U.S. Department of Justice, Office of Justice Programs. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/ecp.pdf>

Heckman, J., & Lafontaine, P. (2007). *The American high school graduation rate: trends and levels*. Bonn, Germany: Institute for the Study of Labor.

Heckman, J.J., & Lafontaine, P.A. (2010). The American high school graduation rate: Trends and levels. *Review of Economics and Statistics*, 92(2), 244-262.

Herlihy, C. M., Kemple, J. J., & Smith, T. J. (2005). Making progress toward graduation. Evidence from the Talent Development High School Model. Baltimore, MD: Center for Research on the Education of Students Placed At Risk. Retrieved from <http://www.mdrc.org/publications/408/full.pdf>

Herlihy, C. M., & Quint, J. (2006). *Emerging evidence on improving high school achievement and graduation rates: The effects of four popular improvement programs*. Washington, DC: American Institutes for Research.

Herlihy, C. (2007). *State and district-level support for successful transitions into high school*.

- Policy Brief*. ().National High School Center. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=ED501074&site=eds-live&scope=site>
- Hertzog, C. J. & Morgan, P. L. (2001). Designing comprehensive transitions. *Principal Leadership* 1(7), 10-18.
- Holland, H., & Mazzoli, K. (2001). Where everybody knows your name. *Phi Delta Kappan*, 83(4), 294-303.
- Holt, L. J., Bry, B. H., & Johnson, V. L. (2008). Enhancing school engagement in at-risk, urban minority adolescents through a school-based, adult mentoring intervention. *Child & Family Behavior Therapy*, 30(4), 297-318.
- Hosmer, D. W., & Lemeshow, S. (2000). Applied logistic regression / David W. Hosmer, Stanley Lemeshow. New York : Wiley, c2000.
- Hughes, J. N., Cavell, T. A., & Jackson, T. (1999). Influence of the teacher–student relationship on childhood conduct problems: A prospective study. *Journal of Clinical Child Psychology*, 28(2), 173-184.
- Hussong, A., Stein, G. L. (2007). Social and academic expectations about high school for at-risk rural youth. *American Secondary Education*, 36(1), 59-79.
- International Center for Leadership in Education (2005). *Reinventing 9th grade academics through personalization*. Rexford, NY: International Center for Leadership in Education.
- Jekielek, S. M., Moore, K. A., Hair, E. C., Scarupa, H. J., & Child Trends, I. C. (2002). *Mentoring: A promising strategy for youth development*. Child Trends Research Brief. Retrieved from <http://www.childtrends.org/files/MentoringBrief2002.pdf>
- Johnson, V. L., Holt, L. J., Bry, B. H., & Powell, S. R. (2008). Effects of an integrated prevention

- program on urban youth transitioning into high school. *Journal of Applied School Psychology*, 24(2), 225-246. doi: 10.1080/15377900802089999
- Katz, M. (1997). *On playing a poor hand well: Insights from the lives of those who have overcome childhood risks and adversities*. New York, NY US: W W Norton & Co.
- Kemple, J. J., Herlihy, C. M., Smith, T. J., & Manpower Demonstration, R. C. (2005). *Making progress toward graduation: Evidence from the talent development high school model*. MDRC. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=ED485348&site=eds-live&scope=site>
- Kennelly, & M. Monrad (Eds.), *Easing the transition to high school: Research and best practices designed to support high school learning* (pp. 30 – 34). Washington, DC: Department of Education. Retrieved from [http://www.betterhighschools.org/docs/NHSC\\_PolicyBrief\\_TransitionsIntoHighSchool.pdf](http://www.betterhighschools.org/docs/NHSC_PolicyBrief_TransitionsIntoHighSchool.pdf)
- Kennelly, L. & Monrad, M. (2007a). *Easing the transition to high school: Research and best practices designed to support high school learning*. Washington, D.C.: National High School Center.
- Kennelly, L., & Monrad, M. (2007b). *Approaches to dropout prevention: Heeding early warning signs with appropriate interventions*. Washington, DC: National High School Center.
- KewalRamani, A., Gilbertson, L., Fox, M., & Provasnik, S. (2007). *Status and Trends in the Education of Racial and Ethnic Minorities* (NCES 2077-039). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of

Education.

Klein, R. (1996). A steering hand away from trouble. *Times Educational Supplement*, (4150), 5.

Retrieved from <http://www.tes.co.uk/teaching-resource/A-steering-hand-away-from-trouble-25377/>

Kochan, F.K. & Funk, F. (2000) *Leadership from a female perspective: identifying characteristics of model mentors*, in: C. Funk, A. Pankake & G. Scroth, *Women as school executives: the complete picture* (Austin, TX, Texas Council of Women School Executives).

Kolb, B., & Whishaw, I. (2003). *Fundamentals of human neuropsychology* (5th ed.). New York: Worth.

Lan, W., & Lanthier, R. (2003). Changes in students' academic performance and perceptions of school and self before dropping out of schools. *Journal of Education For Students Placed At Risk*, 8(3), 309-332.

Langenkamp, A. G. (2010). Academic vulnerability and resilience during the transition to high school: The role of social relationships and district context. *Sociology of Education* 83(1), 1-19. doi: 10.1177/0038040709356563

Levin, H. M., Belfield, C., Muennig, P., & Rouse, C. (2007). *Costs and Benefits of an Excellent Education for All of America's Children*. Retrieved from [http://www.cbcse.org/media/download\\_gallery/Leeds\\_Report\\_Final\\_Jan2007.pdf](http://www.cbcse.org/media/download_gallery/Leeds_Report_Final_Jan2007.pdf)

Levin, H.M. (2008). The economic payoff to investing in educational justice. *Educational Researcher*, 38(1), 5-20.

Lewis, J. (1991). The physiological and psychological development of the adolescent: Contents

- of curriculum unit 91.05.07. Yale-New Haven Teachers Institute. Retrieved from <http://www.yale.edu/ynhti/curriculum/units/1991/5/91.05.07.x.html>
- Lomax, R. G. (2007). *An introduction to statistical concepts (2nd ed.)*. Mahwah, NJ US: Lawrence Erlbaum Associates Publishers.
- Lozano, A., Watt, K. M., & Huerta, J. (2009). A comparison study of 12th grade hispanic students' college anticipations, aspirations, and college preparatory measures. *American Secondary Education*, 38(1), 92-110. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=EJ862704&site=eds-live&scope=site;>  
<http://www.ashland.edu/academics/education/ase/index.html>
- Lynch, M., & Cicchetti, D. (1992). Maltreated children's reports of relatedness to their teachers. In R. C. Pianta (Ed.), *Beyond the parent: The role of other adults in children's lives*. (pp. 81-107). San Francisco, CA US: Jossey-Bass.
- Maddox, S. J., & Prinz, R. J. (2003). School bonding in children and adolescents: Conceptualization, assessment, and associated variables. *Clinical Child and Family Psychology Review*, 6(1), 31-49. doi:10.1023/A:1022214022478
- Makinen, M., Puukko-Viertomies, L., Lindberg, N., Siimes, M., & Aalberg, V. (2012). Body dissatisfaction and body mass in girls and boys transitioning from early to mid-adolescence: Additional role of self-esteem and eating habits. *BMC Psychiatry* 12(35). doi:10.1186/1471-244X-12-35
- Maylor, U. (2009). They do not relate to Black people like us: Black teachers as role models for Black pupils. *Journal of Education Policy*, 24(1), 1-21.
- McLaughlin, M. W., & Others, A. (1994). *Urban sanctuaries: Neighborhood organizations in the*

*lives and futures of inner-city youth.*

- McPartland, J. M., & Nettles, S.M. (2001). Using community adults as advocates or mentors for at-risk middle school students: A two-year evaluation of project RAISE. *American Journal of Education*, 99(4), 568-586.
- Mecca, A. M. (2001). *The mentoring revolution: Growing America one child at a time*. Tiburon, CA: California Mentoring Foundation.
- Mendenhall, W., Mendenhall, W., & Sincich, T. (1996). *A second course in statistics: regression analysis / William Mendenhall, Terry Sincich*. Upper Saddle River, N.J. : Prentice Hall, c1996.
- Meyer, K. C., & Bouchey, H. A. (2010). Daring to DREAM: Results from a mentoring programme for at-risk youth. *International Journal of Evidence Based Coaching and Mentoring*, 8(1), 67-84.
- Miao, J., & Wheelock, A. (2005). The ninth-grade bottleneck: An enrollment bulge in a transition year that demands careful attention and action. *The School Administrator*, 62(3), 36.
- Miller, B. M. (2003). *Critical hours: Afterschool programs and educational success*. Brookline, MA: Nellie Mae Education Foundation. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=edsref&AN=CHAPES.MILLER.NELLIEMAEEDUCATIONFOUNDATION.BJJC.&site=eds-live&scope=site>
- Mizelle, N. B. (2005). Moving out of middle school. *Educational Leadership*, 62(7), 56-60.
- Montgomery, G. T., & Hirth, M. A. (2011). Freshman transition for at-risk students: Living with HEART. *NASSP Bulletin*, 95(4), 245-265. Retrieved from



[http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com/login.aspx?direct=true  
&db=eric&AN=EJ954277&site=eds-live&scope=site;](http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ954277&site=eds-live&scope=site;)

<http://dx.doi.org/10.1177/0192636511426618>

National Center for Education Statistics. (2006). *The average freshman graduation rate for public high schools from the common core of data: School years 2002–03 and 2003–04* (NCES 2006–606rev). Washington, DC: U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2006/2006606rev.pdf>

National Center for Education Statistics. (2011). *Public school graduates and dropouts from the common core of data: School Year 2008-09*. Retrieved from <http://www.battlecreekenquirer.com/assets/pdf/A517895597.PDF>

National Research Council & Committee on Increasing High School Students' Engagement and Motivation to Learn. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington DC: National Academies Press.

Neild, R. C. (2009). Falling off track during the transition to high school: What we know and what can be done. *The Future of Children*, 19(1), 53-76.

Neild, R. C., & Balfanz, R. (2006). *Unfilled promise: The dimensions and characteristics of Philadelphia's dropout crisis, 2000-2005*. Baltimore: Center for Social Organization of Schools, John Hopkins University.

Neild, R. C., Balfanz, R., & Herzog, L. (2007). An early warning system. *Educational Leadership*, 65(2), 28-33. Retrieved from [http://new.every1graduates.org/wp-content/uploads/2012/03/Early\\_Warning\\_System\\_Neild\\_Balfanz\\_Herzog.pdf](http://new.every1graduates.org/wp-content/uploads/2012/03/Early_Warning_System_Neild_Balfanz_Herzog.pdf)

Noam, G. G., & Fiore, N. (2004). Relationships across multiple settings: An overview. *New Directions for Youth Development*, (103), 9-16.

- Orfield, G., Losen, D., Wald, J., & Swanson, C.B. (2004). *Losing Our Future: How Minority Youth are Being Left Behind by the Graduation Rate Crisis*. Cambridge, MA: The civil rights Project at Harvard University.
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543.
- Pallant, J. (2010). *SPSS survival manual : A step by step guide to data analysis using SPSS / julie pallant* Maidenhead : Open University Press/McGraw-Hill, 2010; 4th ed.
- Pascarella, J. (1998). *A four-stage mentoring model that works*, in: S. Goodlad (Ed) *Students as mentors and tutors* (London, Kogan Page).
- Potter, L., Schlisky, S., Stevenson, D., & Drawdy, D. (2001). The transition years: When it's time to change. *Principal Leadership*, 1(7), 52-55.
- Price, L. F. (2005). The biology of risk taking. *Educational Leadership*. 62(7), 22-26.
- Queen, J. A. (2002). *Student transitions from middle to high school: Improving achievement and creating a safer environment*. Larchmont, NY: Eye on Education.
- Reschly, A.R., & Christenson, S.L. (2006). Promoting successful school completion. In G.G. Bear & K.M. Minke (Eds.), *Children's Needs-Ill: Development, Prevention, and Intervention* (pp. 103-113). Bethesda, MD: National Association of School Psychologists.
- Rew, L. (2005). *Adolescent health: A multidisciplinary approach to theory, research, and intervention*. Thousand Oaks, CA: Sage.
- Rhodes, J. E., & Grossman, J. B. (2000). Agents of change: Pathways through which mentoring relationships influence adolescents' academic adjustment. *Child Development*, 71(6), 1662.
- Rhodes, J. E. (2005). A model of youth mentoring. In M. J. Karcher (Ed.), *Handbook of youth*

- mentoring*. (pp. 30-43). Thousand Oaks, CA: Sage Publications Ltd.
- Richardson, J. V., (2005). *What makes a good mentor?* Retrieved from <http://polaris.gseis.ucla.edu/jrichardson/documents/mentor.htm>
- Rogers, C. R. (1959). *A theory of therapy, personality and interpersonal relationships*. In S. Koch (Ed.), *Psychology: A study of a science* (pp. 184–256). New York: McGraw-Hill.
- Rubin, D. B. (1997). Estimating causal effects from large data sets using propensity scores. *Annals Of Internal Medicine*, 127(8 PART 2), 757-763.
- Rutherford, M. (1998, October). How to make a better student. *Time Magazine*, pp.78-86
- Ryan, A. M. (2001), The Peer Group as a Context for the Development of Young Adolescent Motivation and Achievement. *Child Development*, 72: 1135–1150.
- Seminole County Public Schools (2011), *Student progression plan*, Retrieved from <http://www.scps.k12.fl.us/Portals/53/assets/pdf/PolicyFiles/StudentProgressionPlan.pdf>
- Shin, H. S. (2001). A review of school-based drug-prevention program evaluation in the 1990s. *American Journal of Health Education*, 32(3), 139-47.
- Shriberg, D., & Shriberg, A. (2006). High-stakes testing and dropout rates. *Dissent*, 53(4), 76-80.
- Slicker, E. K., & Palmer, D. J. (1993). Mentoring at-risk high school students: Evaluation of a school-based program. *School Counselor*, 40(5), 327.
- Smith, T. J. (2007). Managing the transition to ninth grade in a comprehensive urban high school. In L. Kennelly, & M. Monrad (Eds.), *Easing the transition to high school: Research and best practices designed to support high school learning* (pp. 30 – 34). Washington, DC: U.S. Department of Education. Retrieved from [http://www.betterhighschools.org/docs/NHSC\\_Snapshot\\_EdisonAcademy.pdf](http://www.betterhighschools.org/docs/NHSC_Snapshot_EdisonAcademy.pdf)
- Smith, J.S., Akos, P., Lim, S., & Wiley, S. (2008). Student and Stakeholder perceptions of the

- transition to high school. *The High School Journal*, 91 (3), 32-12.
- Socioeconomic status. (n.d.). *Reference.com*. Retrieved from  
<http://www.reference.com/browse/socioeconomic+status>
- Sornson, B. (2007). The early learning success initiative. *Educational Leadership*, 65(2), 42-43.
- Soucy, N., & Larose, S. (2000). Attachment and control in family and mentoring contexts as determinants of adolescent adjustment at college. *Journal of Family Psychology*, 14(1), 125-143. doi:10.1037/0893-3200.14.1.125
- Southern Regional Education Board (2002). *Opening doors to the future: Preparing low-achieving middle grades students to succeed in high school*. Atlanta, GA: Southern Regional Education Board. Retrieved from  
[http://publications.sreb.org/2001/02V41\\_2002\\_Outstanding\\_Pract.pdf](http://publications.sreb.org/2001/02V41_2002_Outstanding_Pract.pdf)
- Spencer, R. (2000). *Relationships that empower children for life: A report to the Stone Center directors*. Wellesley, MA: Wellesley College Stone Center.
- Stanford (n.d.), *Stanford medicine*. Retrieved from  
[http://cancer.stanford.edu/neuroendocrine/clinical\\_services.html](http://cancer.stanford.edu/neuroendocrine/clinical_services.html)
- Steinberg, W.J. (2008). *Statistics alive!*. Thousand Oaks, CA US: Sage Publications, Inc.
- Students with Disabilities. (2011). *fldoe.org*. Retrieved from  
<http://www.fldoe.org/ese/pdf/ESE2011.pdf>
- Sum, A., Khatiwada, I., McLaughlin, J., & Palma, S. (2009). *The consequences of dropping out of high school: Joblessness and jailing for high school dropouts and the high cost for taxpayers*. Boston, MA: Center for Labor Market Studies.
- Susman, E. J., & Rogol, A. (2004). Puberty and psychological development. In Lerner, R. M. & Steinberg, L. (Eds.), *Handbook of adolescent psychology* (2nd ed.) (pp.15-44).

- Hoboken, NJ: John Wiley & Sons, Inc.
- Swanson, C. B., & Schneider, B. (1999). Students on the move: Residential and educational mobility in America's schools. *Sociology of Education*, 72(1), 54-67.
- Swanson, C. B. (2004). *The real truth about low graduation rates: An evidence-based commentary*. Washington, DC: Urban Institute. Retrieved from [http://www.urban.org/UploadedPDF/411050\\_realtruth.pdf](http://www.urban.org/UploadedPDF/411050_realtruth.pdf)
- Tarter, R. E., Sambrano, S., & Dunn, M. G. (2002). Predictor variables by developmental stages: A center for substance abuse prevention multisite study. *Psychology of Addictive Behaviors*, 16(4), S3-S10. doi:10.1037/0893-164X.16.4S.S3
- The Boomerang Project. (2012). *About Us*. Retrieved from <http://www.boomerangproject.com/about>
- The Boomerang Project. (2012b). *What is Link Crew?* Retrieved from <http://www.boomerangproject.com/link/what-link-crew>
- The Mentoring Institute. (2001, Spring). *TeamMates mentoring program: Program management manual*. Lincoln: TeamMates Nebraska.
- Thompson, L. A., & Kelly-Vance, L. (2001). The impact of mentoring on academic achievement of at-risk youth. *Children and Youth Services Review*, 23(3), 227-242. doi:10.1016/S0190-7409(01)00134-7
- Tierney, J. P., Public/Private Ventures, P., PA., & Others, A. (1995). *Making a difference. An impact study of big Brothers/Big sisters*.
- Tobler, N. S., & Stratton, H. H. (1997). Effectiveness of school-based drug prevention programs: A meta-analysis of the research. *The Journal of Primary Prevention*, 18(1), 71-128. doi:10.1023/A:1024630205999

- United States Department of Labor (2011), *ODEP*. Retrieved from  
<http://www.dol.gov/odep/pubs/fact/cultivate.htm>
- University of South Florida. (n.d.) Retrieved from  
<http://luna.cas.usf.edu/~mbrannic/files/regression/Collinearity.html>
- U.S. Bureau of the Census (2006). Income in 2005 by educational attainment of the population 18 years and over. Washington DC: U.S. Government Printing Office.
- Walsh, M. M. (2002). Delivering the promise to 9th graders. *The School Administrator*, 59(3), 20-22.
- Warren, J.R., & Halpern-Manners, A. (2007). Is the glass emptying or filling up? Reconciling divergent trends in high school completion and dropout. *Educational Researcher*, 36, 335-343.
- Watt, K. M., Powell, C. A., Mendiola, I. D., & Cossio, G. (2006). Schoolwide impact and AVID: How have selected texas high schools addressed the new accountability measures? *Journal of Education for Students Placed at Risk*, 11(1), 57-73. Retrieved from  
[http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=EJ733708&site=eds-live&scope=site;  
http://dx.doi.org.ezproxy.lib.ucf.edu/10.1207/s15327671espr1101\\_4](http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com.ezproxy.lib.ucf.edu/login.aspx?direct=true&db=eric&AN=EJ733708&site=eds-live&scope=site;http://dx.doi.org.ezproxy.lib.ucf.edu/10.1207/s15327671espr1101_4)
- Weber, D. (2007, September 21). High school dropouts cost a bundle. *The Orlando Sentinel*. Retrieved from [http://blogs.orlandosentinel.com/news\\_education\\_edblog/2007/09/high-school-dro.html](http://blogs.orlandosentinel.com/news_education_edblog/2007/09/high-school-dro.html)
- Wen, X., W., Leow, C., Hahs-Vaughn, D., Korfmacher, J. & Marcus S. (2012). Are two years

- better than one year? A propensity score analysis of the impact of Head Start program duration on children's school performance in kindergarten. *Early Childhood Research Quarterly*, 27(4) (Supporting Optimal Child Development through Early Head Start and Head Start Programs: Secondary Data Analysis of FACES and EHSREP Name), 684-694. doi:10.1016/j.ecresq.2011.07.006
- White, A. (2004). Alcohol and the adolescent brain. *Topics in alcohol research*. Retrieved From <http://www.dontletminorsdrink.com/downloads/Alcohol%20the%20Adolescent%20Brain%202005%20Duke%20Univ.pdf>
- Willis, J., M.D. (2006). *Research-based strategies to ignite student learning*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Willis, J., M. D. (2007). *Brain-friendly strategies for the inclusion classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329-339. doi:10.1037/0022-0663.81.3.329
- Zimmerman, B. J., & Schunk, D. H. (2001). In Schunk D. H. (Ed.), *Self-regulated learning and academic achievement: Theoretical perspectives (2nd ed.)*. Mahwah, NJ US: Lawrence Erlbaum Associates Publishers.
- Zvoch, K. (2006). Freshman year dropouts: Interactions between student and school characteristics and student dropout status. *Journal of Education for Students Placed at Risk*, 11(1), 97-117. Retrieved from <http://ezproxy.lib.ucf.edu/login?URL=http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ733707&site=eds-live&scope=site;>

[http://dx.doi.org/10.1207/s15327671espr1101\\_6](http://dx.doi.org/10.1207/s15327671espr1101_6)