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THE PREDICTIVE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT SCORES AND PASS/FAIL RATES OF A CREDIT RECOVERY COURSE AMONG HIGH SCHOOL STUDENTS

by

Tara Lynn Douds

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this predictive correlational study was to examine the relationship between Finn's conceptual framework of student engagement as it relates to the pass/fail rate of an online credit recovery course. A logistic regression was utilized in this study. The predictor variable was student engagement of high school students. The criterion variable was the pass/fail rate of a credit recovery course. The participants included a nonrandom sample of 49 students from two public high schools. The students completed the Motivation and Engagement Scale – High School (MES-HS) survey comprised of 44 questions, which measured student motivation and engagement. The results indicated that student engagement was a predicator of a student's academic success. Suggestions for further research were included.

Keywords: student engagement, credit recovery

Dedication

My first dedication is to my Savior and Lord, Jesus Christ, who have given me the strength and opportunity to complete my dissertation.

This is dedicated to my husband, Rick, and our daughter, LeAndra, for their support, patience, and encouragement. Without my family support, this dissertation would still just be a dream instead of a reality.

I would like to thank my parents for instilling that knowledge and education is important in one's life. My mom, Jackie Mentz, whose love has no bounds. Also, to the memory of my daddy, the late Dr. Rev. Marlin A, Mentz, for his example of lifelong learning.

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List of Abbreviations

Advanced Placement (AP)

Average Yearly Progress (AYP)

Bring Your Own Device (BYOD)

Career, Technical, and Agricultural Education (CTAE)

College and Career Ready Performance Index (CCRPI)

Common Core State Standards Initiative (CCSSI)

Douglas County School System (DCSS)

Education 2020 (E2020)

English Language Learners (ELL)

Grade Point Average (GPA)

Individual with Disabilities Education Act (IDEA)

Institutional Review Board (IRB)

International Association Committee of Online Learning (iNACOL)

Motivational and Engagement Scale-High School (MES-HS)

No Child Left Behind (NCLB)

Ombudsman (OMB)

Organization for Economic Co-operation and Development (OCED)

Performance Learning Center (PLC)

Universal Design Learning (UDL)

CHAPTER ONE: INTRODUCTION

Overview

There are many factors that affect the success or failure of students' ability to graduate from high school. The purpose of this study was to examine student engagement and whether student engagement was a predictor of success for students who were enrolled in credit recovery course(s). There was little research available on student engagement and how the level of engagement may predict the pass/fail rate of students. Chapter one will discuss the background, problem statement, significance of study, and present the research questions. Definitions for the study are provided at the end of this chapter.

Background

Graduating from high school with a diploma is a rite of passage for high school students, but many students are not able to achieve this goal. The President of the United States, Barack Obama, addressed this problem in his State of the Union Address of 2009. In his speech, President Obama stated that American youth need to "Commit to at least one year or more of higher education or career training." "… Every American will need to get more than a high school diploma. And dropping out is no longer an option. It's not quitting yourself, it's quitting on your country" (Murnrne & Hoffman, 2013, p. 58). The U.S. Department of Education stated that the national high school graduation rate for 2011 was 75% (Herling & Dillon, 2012). This means that 25% of high school students do not graduate with a diploma. Even though the graduation rates for high school students have significantly increased between 2000 and 2010, they continue to fall behind other countries.

"Dropping out is a process rather than an explicit decision" (Murnrme & Hoffman, 2009, p. 59). The decision to not complete high school is not instantaneous. Typically, the student is disengaged from school over a long period of time before dropping out. "The decision to drop out of school often results from a longer process of disengagement that begins in elementary school" (Messacar & Oreopoulos, 2013, p. 3). Over the years, research has been conducted on how much student engagement affects students staying in school, earning credits, and completing high school. Student engagement has been identified as a critical factor for students who graduate from high school. School districts understand that student engagement is crucial to obtaining a high school diploma.

School districts are implementing various alternative programs in order for students to recover academic credits. Most school districts require students to earn a certain number of credits known as Carnegie Units. When a student fails a class, he/she does not earn a credit for that class. In the past, students had to retake the class at school or attend summer school to make up the credit. Students who retake failed classes to earn credits often become unmotivated, disengaged, and often decided to drop out rather than sit through the same class again. With the implementation of credit recovery programs, students can "recover" and earn those credits outside of the traditional way of learning. There are many different types of credit recovery programs available to school districts. Several large urban school districts are using online classes tailored to their curriculum that allows students to earn those credits that are lacking for graduation such as Boston, Chicago, and New York City school systems (Zehr, 2010). These alternative

nontraditional programs permit school districts to help students achieve their goal of receiving a high school diploma.

In the early 1900's, the high school graduation rate was low for teenagers. The graduation rate for students in high school increased from 6% to 80% from 1900 to 1970 in the United States. During the 1960's, it was expected for all youth to graduate from high school. "By the late 1960's, the U. S. ranked first among countries in the Organization for Economic Co-operation and Development (OCED)" …..which is a measure of educational attainment (Murnrne & Hoffman, 2013, p. 58). It was not until the 1960's that society began to worry about students who did not finish high school, but it was still not considered a significant problem that needed to be addressed. Over the next 20 years, society was not concerned with graduation rates. It was not until *A Nation at Risk* was published in 1983, that concerns were raised. Early intervention programs were not successful in identifying and targeting at risk students. Some students were served who would not have graduated and other students who were not served did not graduate. The U.S. high school graduation rate remained the same between 1970 and 2000. Graduation rates for other countries in the OECD continued to increase. The United States graduation rates ranked 13th out of the 19 OECD countries by the year 2000. Two independent sources show that between 2000 and 2010, the graduation rate increased by 6%. It is difficult to compare graduation rates between states. Over time, states have used different formulas to calculate graduation rates. States were using Average Yearly Progress (AYP) as their indicator for high school graduates under the No Child Left Behind Act of 2001 (NCLB) which reauthorized the Elementary and Secondary Act. Currently, states that are participating in Race to the Top are using College and Career Ready

Performance Index (CCRPI). Just recently, states have begun to use a common formula. Georgia currently uses the College and Career Ready Performance Index (CCRPI) which "is a comprehensive school improvement, accountability, and communication platform for all educational stakeholders that will provide college and career readiness for all Georgia public school students" (Georgia Department of Education, 2010, para. 1). Despite this increase, the 2010 U. S. graduation rate was below the OECD average. "According to the U. S. Department of Education, the 2011 national high school graduation rate was 75%" (Herling & Dillion, 2012, p. 12). As a result, schools are under federal and state mandates to improve graduation rates. This can be accomplished if students stay in school and graduate on time. School districts were looking for ways to increase graduation rates to meet federal standards required in No Child Left Behind Act. Credit recovery programs were being offered in several different formats. At that time, online learning was becoming one of the more popular formats available for credit recovery classes. The goal of credit recovery programs is to increase graduation rates and help struggling students remain in high school (Georgia Virtual Learning: School Credit Recovery section, 2014, para. 2). Students have already met the seat time (actual time spent in class that meets state criteria for attendance) requirement, but not the academic content requirement. School districts are interested in students mastering the content of credit recovery classes. More states are waiving seat time and looking at proficiency of standards as the only criteria for earning credits. This nontraditional setting encourages students to achieve their goals, be self-motivated, and independent. This is one reason credit recovery programs have "increased eightfold from 2008 to 2010" (Zehr, 2010, p. 10).

Previous research studies indicate that student engagement is a predictor of student

achievement and behavior in school. "Over the past two decades, students' engagement at school has emerged as a critical factor across hundreds of dropout prevention and recovery programs in the United States" (Klem & Connell, 2004, p. 262). Approximately 40% to 60% of high school students become disengaged from school. Students who are engaged in school are more likely to have higher grades and test scores. They also have lower dropout rates. Students with low levels of engagement often display more disruptive behaviors, higher level of absenteeism, and are more likely to drop out of school.

The President of the United States, Barack Obama, understood the importance of a high school diploma. In his 2012 State of the Union address, President Obama was quoted as saying, "When students don't walk away from their education, more of them will walk to the stage to get their diploma. When students are not allowed to drop out, they do better" (Messacar & Oreopoulos, 2013, p. 56). Research suggests that young adults who do not obtain a high school diploma will more likely live in poverty, be unemployed, incarcerated, become welfare recipients, and become single parents. They will also be less healthy and unhappier than high school graduates. Furthermore, these students will earn a great deal less than their counterparts who obtained a high school diploma. "The most common occupations for those with less than a high school education includes sales workers, truck drivers, janitors, construction labors, and housekeeping cleaners" (Herling & Dillon, 2012, p. 13). The earning potential for high school dropouts is bleak. The Alliance for Excellent Education (Herling & Dillon, 2012) reports that the average high school graduate will earn $6,684 more each year than a high school dropout. In 2009, the projected lifetime earnings for workers without a high school diploma is $977,000 compared to

$1,304,000 for workers with a high school diploma. A worker with a four-year college degree will earn $2,268,000.00. Students who do not complete high school will have difficulty accumulating wealth. There is a direct correlation between education level and asset accumulation. Accumulating wealth helps break the poverty cycle and helps to create a vibrant working class. Per Tyler and Loftstrom (2009), the cost to society will include lower tax revenues, an increase in public assistance, health care, and an increase in high crime rates. There is a large population of incarcerated people without high school diplomas. Therefore, it is important for every young adult to graduate with a high school diploma.

Student engagement has a social impact on schools, communities, and education. Students who are disengaged from learning and from the school environment experience more behavioral, emotional, and academic concerns. In the school setting, disengaged students exhibit more off task behaviors (e.g. looking around room, talking to peers), more suspensions, and attendance issues (Stout & Christenson, 2009). Their inappropriate behaviors have a negative impact on their earning credits in the traditional school setting. The emotional aspect is shown by students being aphetic, having a flat affect, and little to no connection to school, teachers, and/or their peers. These students are not active participants during the school day. They are also not involved in after school extracurricular activities, such as sports and clubs (Stout & Christenson, 2009). Disengagement with academics is exhibited with students lacking the required academic credits. Furthermore, these students consistently fall behind their peers in credits earned. They also have failing grades on tests and assignments. They do not make up tests and assignments when missed.

Overall, studies have shown that female students are more engaged than male students in high school. Female students exhibit less behavioral problems, and possess better communication skills which may attribute to more participation in classroom activities and in other areas of engagement. Female high school students perform better academically and are more likely than male high school students to graduate (Lietaert, Roorda, Laevers, Verschueren, & De Fraine, 2015).

Increasing the graduation rate is imperative if all students are expected to obtain a high school diploma. There are various reasons as to why students do not graduate from high school. Finding the appropriate high school setting to meet a student's individual needs is crucial in order to increase graduation rates. Most high school students see the benefits of obtaining a high school diploma. They work hard to pass the required classes and earn credits. Approximately 25% of students have difficulty passing required classes and earning credits (Herling & Dillon, 2012). Many have not experienced success in school. They continue to fall further behind in their academics. Over time these students become disengaged from school.

The basis for this study is J. D. Finn's Conceptual Framework for Engagement with the exception of one component that is not included in the survey which is academic engagement. Finn's Conceptual Framework for Engagement is constructed from his participation-identification model of school withdraw. The participation-identification model says that students increase their participation as they identify more with school. From this model, "engagement is defined by identification and participation at school" (Archambault, Janosz, Fallu, & Pagani, 2009, p. 651). Student engagement is multidimensional; it involves behavior, cognitive, and affect. "Behavioral

engagement is an observable indicator, while cognitive and affective engagement are internal indicators, requiring understanding students' personal meaning of experiences and performance" (Stout and Christenson, 2009, p. 17). These three constructs are incorporated in Finn's Conceptual Framework for Engagement. Behavioral includes attendance, fewer numbers of suspensions, and the amount of classroom participation. The cognition components include perceived relevance of schoolwork, meta-cognition, and self-regulation toward goals. Emotional includes how much of a sense of belonging the student has with the school. It also includes the "perceived connection at school with teachers and peers" (Stout & Christenson, 2009, p. 18). The survey for this research include questions that cover Finn's Conceptual Framework of behavioral, cognitive, and emotional components to develop a profile of positive engagement or negative engagement. Eleven categories are derived from the survey questions such as self-belief, persistence, planning and anxiety. These categories develop an overall motivational quotient referred to as global positive engagement or global negative engagement to determine the effect of engagement on school performance. Ultimately, the perception is that engaged students feel successful at school. They make good grades and can pass classes and state mandated tests. In return, they earn the required credits, which enable them to graduate with a high school diploma.

Problem Statement

Communities, schools, parents, and students understand the value of a high school diploma. The benefits of a high school diploma are clearly evident, but approximately 25% of students do not graduate with a high school diploma (Herling & Dillon, 2012). School districts are looking at alternative nontraditional programs to help students become successful in earning credits

in order to graduate from high school. According to Tyler and Lofstrom (2009), "… little hard evidence reveals what does and does not work to decrease the probability of dropping out" (p. 79). A number of programs have been developed and implemented with the goal of increasing the graduation rate. No one is sure exactly which program is the most effective in increasing the graduation rate. Stout and Christenson (2009) state "interventions designed to enhance school completion are worth the investment" (p. 19). Only a few programs have been evaluated for their effectiveness. The International Association Committee of Online Learning (iNACOL) feels that possible avenues of research are warranted in the area of student engagement. "Examine the factors that facilitate high levels of student engagement and contribute to the development of a positive learning community in virtual school environments (Archambault et al., 2012, p. 19). iNACOL also says that research "is needed into the design of learning environments that support at-risk students, in particular the balances among online and face to face time, the support relationship with adults, effective and academic supports, parent/family support, and the contribution of expanding learning time" (Archambault et al., 2012, p. 12). Research has been conducted to demonstrate the effectiveness of on online learning, but little has been written on the ability of credit recovery programs to improve the graduation rate (Zehr, 2010). It is difficult to know the effectiveness and success of this type of learning environment without prior research of credit recovery programs online for high school students. There is a gap in literature when it comes to measuring the effectiveness of credit recovery programs to improve graduation rates where student engagement is concerned.

Purpose Statement

The purpose of this correlational predictive design was to examine the relationship between Finn's Conceptual Framework of Engagement and students' pass/fail rate who take a credit recovery course. The predictor variables were high school students' engagement scores. Engagement is multidimensional and includes behavioral, cognitive, and emotional engagement. There were eleven categories in the survey combined to provide four overall global scores. The four overall global scores represented positive motivation, negative motivation, positive engagement, and negative engagement. The positive engagement score and negative engagement score showed the level of engagement. The criterion variable was the pass/fail rates of students taking a credit recovery course. A credit recover course is "a structured means for students to earn missed credit in order to graduate" (St. Andrie & McCabe, 2013, para. 2). The pass rate was when a student earns 70% or above. A student failed the class if the grade is was below 70%. This study was conducted to determine if student engagement can predict the outcome of the credit recovery course. Since student engagement was such a critical factor in students successfully completing high school, it was important to establish if there was a relationship between the variables.

Significance of the Study

The significance of this study may help school districts determine if student engagement will statistically predict if students can earn credit for credit recovery courses. Schools districts across the nation are implementing various forms of credit recovery programs in high schools in the hope that students become engaged in the program and recover missing credits that are needed for graduation. "Even as online credit recovery hits the mainstream, for the most part it has

remained free of any scrutiny beyond what individual school leaders and the consumer marketplace provide" (Carr, 2014, p. 32). Even though there has been a significant increase in the use of credit recovery programs at high schools, there is very little data to support the success or determine the failure of the use of credit recovery programs online especially where the level of student engagement can be a determining factor. There is written evidence on the increase and effectiveness of online schools, but limited research on student engagement as it relates to online credit recovery programs. The results of this study may add to the limited research that has been conducted on the effectiveness of recovering credit from credit recovery classes due to student engagement.

Research Questions

The following research questions were proposed:

RQ1: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for high school students?

RQ2: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for female high school students?

RQ3: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for male high school students?

Definitions

A Nation at Risk - a report issued by the National Commission on Excellence in Education with a primarily focus on secondary education (National Commission on Excellence in Education, 1983).

Advanced Placement (AP) - college level courses that are offered in the regular high school by trained high school teachers (Georgia Department of Education, 2016).

Alternative school - broadly defined as educational activities that fall outside the traditional K–12 curriculum—include home schooling, general educational development (GED) programs, gifted and talented programs, and charter schools (Porowski, O'Conner, & Luo, 2016).

Blended learning - a combination of face to face and online instruction (Dessoff, 2009).

Carnegie Unit - A standard unit "defined as 5 hours of related work per week or 5 periods of 40 to 60 minutes running for at least 36 weeks" (Hall & Gerber, 1985, p. 229).

Common Core Curriculum – a curriculum developed from The COMMON CORE STATE STANDARDS INITIATIVE (CCSSI) that is designed to work across states and districts to ensure that standards are college and career ready and are consistent for all students (Georgia Department of Education, 2016).

Credit Recovery Program – courses offered for students who were unsuccessful in meeting the course requirements for graduation (Goss, 2011).

Education 2020 - the online program that offers an alternative digital learning program that fits student's needs on their schedule. (Georgia Virtual Learning: Georgia Credit Recovery, 2014).

English Language Leaners (ELL) - students whose primary or home language is other than English and who are eligible for services based on the results of an English language proficiency assessment (Georgia Department of Education, 2016).

Face to face learning - personal classroom interaction between teacher and student (Dessoff, 2009).

No Child Left Behind (NCLB) – Federal Law passed in 2001 "is to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging state academic achievement standards and state academic assessments" (No Child Left Behind Act of 2001).

Online learning – when instruction and academic content for education are delivered mainly via the Internet (Cavanaugh, Barbour, & Clark, 2009).

Organization for Economic Co-operation and Development (OCED) – a forum in which governments share experiences and seek solutions to problems (Murnrne & Hoffman, 2013).

Virtual school - is an educational organization that offers K-12 courses through the Internet or Web based methods (Clark, 2001).

CHAPTER TWO: REVIEW OF LITERATURE

Overview

Chapter Two will examine the background, theoretical framework, related literature, identification of at risk students, and other areas that relate to the performance of students in school. This includes a discussion on the difference between credit recovery programs and alternative schools in the West Georgia area. There is also a review of the gender gap in student engagement where females perform better than males due to females' ability to be more engaged in school.

Background

The words accountability, data driven instruction, and decisions based on data are words and phrases used in education to increase student achievement and graduation rates. According to Yazzie-Mintz and McCormick (2012), with the focus on students achieving passing scores on state mandated tests, students feel that the school community is more focused on their scores and performances than on students developing into adolescents, instilling passion and curiosity for learning and engaging. For decades, educators have been challenged to engage students in their own learning. "Engagement with school may also lead to enhanced psychosocial engagement across the lifespan in multiple settings" (Hazel, Vazirabadi, & Gallagher, 2013, p. 690). Studies have shown that as students' progress through school they become more disengaged from school (Klem & Connell, 2004; Yazzie-Mintz & McCormick, 2012). Rural, suburban, and urban schools are not exempt. Engagement is not a synonym for motivation. "Engagement is about relationships" (Yazzie-Mintz, 2007, p. 746). The relationships students have with their schools

and teachers are a major part of student engagement. Knowing and understanding what students feel is vital to developing effective intervention programs. Research has shown that the level of engagement and academic performance may be significantly different when considering gender. Females achieve higher levels of engagement than males (Wang, Willett, & Eccles, 2011). Over the last 20 years, student engagement has emerged as an area of study in the field of Education (Appleton, Christenson, & Furlong, 2008). Finn's Conceptual Framework will guide this study for Engagement. Finn has conducted several studies on student engagement using his framework (Finn, 1989; Finn & Rock, 1997). Online learning or virtual school is annually growing at a rate of 30% (Beem, 2010). In 2009-2010, there were an estimated 1,816,400 students enrolled in distance education courses in K-12 schools in the United States; with 62% enrolled in credit recovery courses (Lewis, Whiteside, & Dikkers, 2014). In a 2013 annual review of online learning every state in the United States offered some type of online learning opportunity for K-12 students (Lewis, Whiteside, & Dikkers, 2014). Some states are creating their own virtual public schools. Whereas, other states are offering their online learning through for-profit vendors. Some online schools are full-time while other online schools are considered supplemental. The State of Georgia offers the following: their own virtual school, an online charter school, and for-profit vendors for their students. Online learning is available for students' K-12. A variety of courses is offered online which includes Advanced Placement Courses, CTAE courses, elective courses, and academic core content courses. This study will focus on credit recovery programs. Credit recovery programs were developed and implemented in order for students to recover credit for failed classes. The goal of credit recovery "… is to increase the graduation rate and to help

struggling students to remain in school" (Goss, 2011, p. 43). The school system where this research takes place uses Education 2020 to implement their credit recovery program. Little research has been conducted concerning student engagement and online credit recovery classes.

Theoretical Framework

Dropping out from high school is not instantaneous, but a long process of disengagement from school (Stout & Christenson, 2009). "The International Association of K-12 Online Learning (iNACOL) Research Committee reports that 9% or 1.2 million high school students in the United States drop out before graduation each year" (Lewis, Whiteside, & Garrett, 2014, p. 3). There is no single factor as to why students drop out of school: there are many factors as to why students drop out of school. Students who experience low achievement in their school performance are considered at risk. In addition, students who have multiple variables such as individual, family, school or community situations that affect students are considered at risk. These multiple factors include but are not limited to divorce, emotional disturbances or learning disabilities. Students' engagement has emerged as a critical factor in whether students drop out or stay in school. The theoretical framework for this research study is Finn's Conceptual Framework for Engagement. The Conceptual Framework for Engagement is based on the participation-identification model. "Engagement is defined by identification and participation at school" (Archambault et al, 2009, p. 652). Identification indicates a sense of belonging and the perceived benefits of schooling. Participation encompasses four components ranging from minimum to maximum engagement. This model emphasizes students bonding with schools. When students do not bond with their schools, there is often an increase in inappropriate behaviors and an increase of students dropping

out of school before graduation. In Finn's model, school completion is comprised of students' participation in school along with identification with school (Stout & Christenson, 2009). Participation is considered the behavioral component of engagement. This is characterized by how involved students are with their school in class related activities or in extracurricular activities. Identification with a school is considered the psychological component of engagement. This includes "… a student's sense of belonging to school and valuing success in school-relevant goals" (Stout & Christenson, 2009, p. 18). "School engagement is a multidimensional construct involving academics, behavior, cognition, and affect…" (Stout & Christenson, 2009, p. 18). The four subtypes of engagement include academic, behavioral, cognitive, and affective. Academic and behavioral are considered observable indicators whereas; cognitive and affective are considered internal indicators. "Engagement requires psychological connections within the academic environment (e.g. positive adult-student and peer-peer relationships) and active student behavior (e.g. attendance, effort)" (Stout & Christenson, 2009, p. 18). A study by Li and Lerner (2013) identified "significant paths from participation to school related feelings and thoughts support Finn's participation-identification model, which postulates that participation (behavioral engagement) precedes increased levels of identification (conceptualized as a hybrid of emotional and cognitive engagements)" (p. 29). These multiple indicators of engagement are an essential part of dropout intervention programs.

Related Literature

Looking back at the history of the establishment of school credit hours started in the United States started with Andrew Carnegie. Andrew Carnegie created the Carnegie Foundation for

Advancement of Teaching in 1905 (Hall & Gerber, 1985). At this time, the foundation established the guidelines for the definitions of colleges and high schools. A couple of years later in 1907, "…the Carnegie Foundation set the standard of 14 units of high school work as the basic minimum for admission to colleges wishing to receive Carnegie pension funds" (Hall & Gerber, 1985, p. 229). As a result, high schools and colleges began to adopt the standards set forth by the Carnegie Foundation. Almost all states have adopted the Carnegie unit as the standard for graduating high school. States have also set a minimum standard for how many Carnegie units are required for content areas. To obtain a high school diploma, the State of Georgia requires students to have 4 units of English/Language Arts, Math, Science, and 3 units of Social Studies and CTAE/Fine Arts/Foreign Language. Students are also required to have one unit for Health and PE and 4 units for electives. Students in Georgia have a total of 23 units which is the minimum required in order to graduate with a regular high school diploma. When students have achieved the required requirements set forth by the states then, "It signifies that a student has attained certain minimum standards and has had the coursework necessary for college entrance" (Hall & Gerber, 1985, p. 231).

At Risk Students

According to Watson and Gemin (2008), "The term at-risk does not have a single definition when applied to students in K-12 education" (p. 4). Researchers and educators agree the ultimate risk is that students will leave school before they successfully complete their K-

12 education. These students are known for dropping out, flunking out, being pushed out, or "age out" of school, but the result is the same - a high school education not completed (Watson & Gemin, 2008).

There are many factors working together or separately that determine what constitutes an at risk student. Some of these factors are the direct result of academic achievement. Some students have not mastered the required curriculum that qualifies them for promotion to the next grade level. Students in high school often do not have the required credits to graduate from high school. At risk students often fall behind other age and/or grade level peers. At risk students typically fail two or more courses. They often are not reading on grade level.

Several nonacademic factors also affect at risk students. Students who are pregnant, have parents who are incarcerated, or have a history of drug and/or alcohol abuse are commonly considered at risk. Students who are identified as being at risk students have at least one or more of the following characteristics:

- Low economic status
- Being from a single parent family
- An older sibling that has dropped out of school
- A student who has changed schools two or more times
- Had grade averages of "C" or lower from 6th grade to 8th grade
- Students who have repeated a grade
- Language barrier
- Lack of stability

- Lack of role models
- 9th grade students who haven't earned enough credit to be promoted to 10th grade
- Students with disabilities

Low economic status greatly affects the academic progression and student retention in public schools due to lack of engagement. "In 2007, the high school dropout rate among persons 16-24 years old was highest in low-income families (16.7 percent) as compared to high-income families (3.2 percent)" (American Psychological Association, 2016, para. 16). The students from lower economic status do not participate in academic activities and do not show an interest in after school activities. They may not fit in because they do not have the money for the "right" pair of tennis shoes, their clothes are not always clean, and they may not have money for lunch or extracurricular activities such as attending a high school football game or money for a field trip. All of these factors can greatly affect the student's willingness or ability to interact with others. Attending the prom may seem like a normal thing to most teenage girls whereas students from an economically challenged household may not have the financial means to buy a new dress, shoes or get their hair fixed for this special occasion. To make up for the lack of financial support from their parent(s), the student may take on a part time job alienating themselves from further participation at school events. They feel disassociated from their classmates due to their low economic status. According to the American Psychological Association (2016), "Children from lower economic status households are about twice as likely as those from high-economic status households to display learning-related behavior problems. A mother's economic status was also related to her child's inattention, disinterest, and lack of cooperation in school"

(American Psychological Association, para. 18). The inattention, disinterest, and lack of cooperation from the student require the schools to identify these students and develop methods to gain their interest and cooperation so that they will want to participate and engage in school activities to help the student develop socially and improve academically.

Children who are raised by one biological parent may have different challenges to overcome compared to children who are raised by two biological parents when it comes to social, cognitive, and emotional stability (Amato, 2005).

Children who are raised by two parents who are married do not have the same range of experiences concerning cognitive, emotional and social problems as children from single family homes. Children from single-family homes tend to withdraw from academics and social activities. "A single parent may have more difficulty supporting their child in extracurricular activities and may not be interested or engaged in the success of their child's academic future and thus are part of the lack of engagement with students and programs in school leading to a higher percentage of students failing to graduate from high school" (Amato, 2005, p. 79). Sometimes an older brother or sister has dropped out of school and has to go to work

in order to help support the family or they may have dropped out because they were failing classes or had attendance issues. Students who have an older sibling who has dropped out of school may think it is okay to drop out of school like their older brother or sister.

Students who frequently change schools experience significant educational consequences. "Over 30% of elementary school students make more than one school change between first and eighth grade, and more than 25% of students make a non-promotional school change between

Grades 8 and 12" (Gasper, DeLuca, & Estacion, 2012, para. 7). High school students who change schools even one non-promotional time are two times more likely to not complete high school as students who do not change high schools. Students change schools because of family and school experiences more often than students changing schools due to moving. Students who are engaged either academically or socially are more likely to remain in school and graduate. The number of moves a high school student makes is related to their performance in school. The more high schools a student attends the more likely the student will not graduate with a regular high school diploma. Research has shown that "...just under 30% of high school students attend more than one high school, and the students who change schools are more likely to drop out" (Gasper, DeLuca, & Estacion, 2012, para. 59).

Schools that provide a culture of responsibility, a caring school staff, understanding that students have different needs, and provide disadvantaged students the resources and additional support needed to be successful foster engagement in school. High school students who have high absenteeism, lower test scores, and do less homework have academic and social adjustment problems that affect their academic progress in the general curriculum.

How successful students are in middle school's core subjects is a strong predictor of how successful students will be in high school. Middle school students whose GPA's are 2.0 and below only have a 50/50 chance of graduating from high school. It is imperative that middle school teachers are able to identify and implement interventions in order to intervene with students who are at risk of not achieving and graduating from high school, even before they enter high school.

Students are considered mobile if they change schools for reasons other than grade promotion. These students do not have the opportunity to form lasting relationships and connections with their peers, teachers, schools and communities. These students are more likely to have lower levels of engagement.

In the 1970's, school districts across the United States embraced social promotion as a way of promoting students from one grade to another. Social promotion is when students are promoted based on their age and not on their level of academic performance. In the 1980's, educators felt that grade retention was more effective than social promotion. According to Bornsheuer, Polonyi, Andrews, Fore, and Onwuegbuzie (2016), "The belief of grade retention is that giving students increased time to master skills and concepts needed in later grades allows them to mature socially, and increases their levels of academic performance (Light & Morrison, 1990; Natale, 1991)" (p. 9). The benefits of retention are inconclusive. There is no real long-term benefit for students when they are retained. Students who are retained perform much better for a couple of years after retention. After that, the long-term benefits are unknown. What is known is that "... ninth graders, more than any other age group, are at an increased risk for high school dropout" (Bornsheur, et al., 2016, p. 10). Each time a student repeats a grade their risk for dropping out also increases.

Students who have multiple risk factors increase their risk of dropping out. These known risk factors fall into one or more of the following categories: individual, family, school, and community (iNACOL, 2008).

English Language Leaners (ELL) are students who have English as their secondary language. ELL students predominately speak another language other than English when at home. Usually their parents and grandparents speak little to no English in the home setting. “Emergent bilingual” students are currently the fastest growing student population in the United States, and the greatest growth has occurred at the secondary level. Emergent bilingual students are students who carry on conversations with their English peers, but these ELL students often lack the needed vocabulary and language acquisition skills in order to achieve academic success. The emergent bilingual student acquires adequate conversational skills, but these skills do not generalize to academic success. English language learners and emergent bilingual students continue to struggle in high school. According to Menkan (2013), "Emergent bilingual graduation and dropout rates are alarming in New York City, where test scores determine high school graduation...." (p. 166). Emergent learners also have lower graduation rates (40% as compared to 75%) and high dropout rates (33% as compared to 17%) than for other students (Menken, 2013).

A lack of stability in a students' home can have a negative impact on their academic progress. Low-income homes are often tumultuous environments. Students may have difficulty getting to school on time on a regular basis. They often do not have a home that is conducive to learning. These students are less likely to participate in safe after school activities.

The lack of role models for at risk students have a negative impact on academic achievement. These students are lacking appropriate role models that are needed to show students the importance of an education. Adults are less likely to have high school diplomas or college degrees in low-income households. Even in education, the male role model is often lacking.

According to the Department of Education Secretary Arne Duncan, “less than two percent of America’s teachers are black men” (Pluviose, 2011, p. 9). Students who identify with role models at home, community or in school become more engaged and experience greater academic success.

Disengagement from school occurs over a long period of time either in elementary school or it can occur when students transition to high school. Ninth grade is a pivotal point in the education career of students. Students who do not academically succeed in ninth grade have a greater likely hood of dropping out from high school. Over 60% of students who fail at least 25% of their credits during their ninth grade year eventually drop out of school (Watson & Grimm, 2008). The findings from Allensworth and Easton (2005) state that students who are successful in their freshman year of high school are 3.5 times more likely to graduate within 4 years than students who are not successful in earning credits by the end of their freshman year in high school. "Nationwide, 30% of all freshmen do not graduate high school with a diploma and 6% of all dropouts leave school by the beginning of their 10th grade year" (Ellerbrock & Kiefer, 2014, p. 3).

As research has suggested there are many theories as to why ninth grade is such a pivotal year for high school students. Ninth grade students experience an increase in peer pressure and there is less parental supervision. Students are entering a new school with new teachers and new friends. Incoming freshman are not adequately prepared for the academic rigor of high school. The organization and size of current high schools is often a source of difficulty for students. In high school, ninth graders face an increase in class size, number of courses per day and movement between classes with a longer school day.

The students who need credit recovery do overlap the students who are considered at

risk. The students who are in each group are not necessarily the same. For example, a student who fails only one class needs credit recovery, but may not be considered at risk. A student who fails two or more courses is considered an at-risk student. In addition, a student may be considered at risk because they have the factors associated with at risk behaviors, but they may never fail a course.

In 1975, President Ford signed Public Law 94-142, which is known as The Education for All Handicapped Children Act into law guaranteeing a free and appropriate education for students with disabilities (Hurd & Piepgrass, 2006). Throughout the years, the law has been amended, reauthorized and renamed to encompass changes. Public Law 94-142 has been renamed the Individuals with Disabilities Education Act (IDEA). IDEA is the basis of special education law. There are currently ten categorical areas of special education eligibility that students can qualify for in order to receive specialized clinical instruction. In the State of Georgia, the nine areas of eligibility are: Specific Learning Disability, Emotional and Behavioral Disorder, Other Health Impaired, Speech Language Impaired, Traumatic Brain Injury, Autism, Intellectual Disabled (Mild, Moderate, Severe, & Profound), Vision Impaired, Deaf Hard of Hearing Impaired, and Orthopedic Impaired.

Students with disabilities are required to follow the same guidelines and meet the same criteria for obtaining a regular high school diploma. They have difficulty progressing through the general education curriculum without additional supports and accommodations. Student supports includes classroom, instructional, and testing accommodations. The type of classroom setting(s) that the students receive instruction can include general education classrooms, co-taught

classrooms, and resource rooms. These area(s) of deficits are usually in reading, writing, and math. The deficits in reading, writing, and math often have a negative impact on any or all course(s) attempted. These students often have to retake courses in order to earn the required credit. Students with disabilities often require repetition and special learning strategies in order to learn and retain material. One way these students are recovering the credit is with online learning. Students with disabilities "... are finding online learning a viable option to address leaner variability" (Smith & Basham, 2014, p. 127).

Student Engagement

Student engagement has been identified as a vital component for drop out intervention programs. An agreed-on definition for students' engagement with school does not exist (Hazel, Vazirabadi, & Gallagher, 2013). The terminology that researchers use to conceptualize engagement is different among researchers. Christenson and other researchers emphasize "engagement is located within students" (Hazel, Vazirabadi, & Gallagher, 2013, p. 689). Fredericks and other researchers "emphasize engagement with the school context" (Hazel, Vazirabadi, & Gallagher, 2013, p. 689). Principals and policymakers also do not always know and understand what engagement means. Per Yazzie-Mint and McCormick (2012), "An informal poll of principals, researchers, and policymakers yield a range of responses to this question; one-word definitions including "involvement," "participation," and "investment"; more expansive answers, such as "deep connection to learning" and "interest in the subject matter"; articulation of ways to measure engagement; such as "amount of time students spend on tasks" and "students asking and answering questions in class"; and metaphors - "I see students huddled together literally digging

in" (p. 745). Engagement encompasses a wide spectrum of words and phrases. The underlying basis of all definitions of student engagement is that engagement can be changed and increased. In addition, that higher level of engagement will result in improving academic performance and increasing the chances that the student will graduate from high school. Students who identify with their schools, have a sense of belonging, and understand the significance of school seem to do better in their academics. Students who identify with their schools participate in school activities at a higher rate. Students who have low participation with school activities do not have a strong sense of belonging and disengagement soon follows. The disengagement from school often leads to students dropping out of school. Students who experience academic success and develop relationships with peers and adults have higher levels of student engagement. Behavior and attitudes are equally important in student engagement (Archambault, 2009). According to Li and Learner (2012), "Over the past 10 years, the major shift in the school engagement literature is the move away from one-dimensional definitions (mostly behavioral ones), to more multidimensional notions of engagement" (p. 21). Most researchers have supported that school engagement should be conceptualized as a multidimensional construct. This allows students' emotional, cognitive, and behavioral experiences in school to be studied simultaneously. Student engagement is multidimensional and encompasses cognitive, affective, and behavioral domains. There is a continuum along these domains. Positive behaviors are defined as "… school attendance vs. skipping class, compliance with rules vs. oppositional behavior" (Archambault, 2009, p. 654). Involvement in school-related tasks is to what extent do students complete their homework and participate in class discussions. The area of extracurricular activities measures the frequency of

student participation. The affective dimension of student engagement refers to perceptions, interests, feeling, and attitudes toward school (Archambault, 2009). What do the students perceive as the benefits of an education? Do they value an education? Do they feel that an education will help them obtain their goals? Cognitive engagement deals with the investment of learning and the use of self-regulation strategies by students (Archbambault, 2009). Are students willing to engage in learning activities? Do they establish academic or task performance goals? "Self-regulation strategies focus on specific learning tools such as memorization, task planning, and self-monitoring" (Archbambault, 2009, p. 654). The process of engagement is as follows: "participation leads to successful performance, promoting feelings of identification with school which in turn promotes ongoing participation" (Stout & Christenson, 2009, p. 18). Numerous researches on student engagement clearly show a link between student engagement and dropping out of high school (Yazzie-Mintz, McCormick, Finn & Rock, Klem & Connell, Archambault et al.). Student engagement is a predictor of behavior and student achievement in school (Kelm & Connell, 2004). Students who are engaged have higher grades and lower dropout rates. Students who are disengaged display more disruptive behaviors in school, have a higher range of absenteeism and drop out of school at a higher rate. Developing student engagement is definitely beneficial to students, schools, teacher, community, and parents.

In education, it is widely known that the gender gap is in favor of girls. Males typically have lower grades, higher dropout rates, and lower engagement levels when compared to females (Lietaert et al., 2015). Several other research studies have been conducted to see if there is a difference between female and male student engagement. These prior research studies indicate that

there is a difference between student engagement and academic performance for males and females gender. Females report higher levels of school engagement when compared to males regardless of the type of engagement measured.

The gender gap widens for males and females as they enter and continue through high school. There is a larger decline in student engagement for males in the high school years. Female students have a higher rate of participation in class, are more attentive, and exert more effort than males. There are a couple of reasons why the gender differences favor females. On previous studies, females score higher on the antecedents of engagement. The second reason is with the focus of learning to be on language and verbal learning, males may consider the curriculum to be too feminine (Lietaert et al., 2015).

Online Learning

Students that are at risk of failing to graduate from high school typically take online courses to recover credits from failed classes that are required for graduation. Online learning requires more motivation since the student has to work independently to take the initiative to go to the computer to complete the lessons. Students taking online courses already have poor study habits and poor time management habits that contribute to the reasons they failed to pass courses for graduation. The students also have to become engaged in the learning process while completing the course(s). The student may become frustrated and give up without completing their assignment(s) when he/she encounters setbacks. Students that are engaged may put forth more effort to complete their online credit recovery course(s).

Over the last several years, the State of Georgia has developed extensive online learning opportunities. In August of 2001, the Georgia State Board of Education approved the Virtual Learning Plan for endorsing online Advanced Placement (AP) courses as well as core curricular courses (Goss, 2011). The Virtual Learning Plan was approved. This addressed the need for online courses.

The Georgia Virtual School "… is accredited by the Southern Association of Colleges and Schools" (Teague, 2013. p. 16). Initially, the virtual school was developed to address the needs of students who lived in rural areas, where highly qualified teachers were lacking, scheduling conflicts, and limited curriculum offerings concerning Advanced Placement (AP) courses (Teague, 2013). The Georgia State Board of Education determined that students were at a disadvantage and needed to be able to compete with other students globally. The courses developed and offered are based on several factors: "… program need, Department of Education requirements, fund availability, graduation requirements, and public interest" (Teague, 2013, p. 15). The Georgia Virtual School does not award diplomas or give course credit without the consent of the local school districts that awards the degrees. The Georgia Virtual School continues to grow. "For the 2012-2013 school years over 18,567 learners from 479 schools were enrolled in 332 online courses" with a completion rate of 90% (Teague, 2013, p. 16). All students are given the opportunity to enroll in Georgia's virtual school. Public school students are given first priority. Private schools and home schools students are able to enroll after public school students.

Course contents are developed and aligned to the Common Core Curriculum and the Georgia Performance Standards. In addition to AP course offerings, the Georgia Virtual School

also offers courses in “career and technical education, world languages, math, language arts, science, social studies, health and physical education, fine arts, and test preparation” (Teague, 2013, p. 17). The Georgia Virtual School also offers a course recovery program. Students who have not successfully passed a course(s) are given an opportunity to retake the course(s). In the course recovery program, students have successfully completed the seat time requirement but not the course content requirement.

In 2006, the state of Georgia was the first state to offer certification for online teachers (Hawkins, 2013). This certification is to prepare educators to teach in an online environment. In the state of Georgia in order to receive, the online endorsement educators must have a valid teaching certificate and complete an online preparation program approved by the state. The state of Georgia requires a preparation program or practicum that focuses on three standards: instructional technology concepts, online teaching and learning methodology, and online assessments (Hawkins, 2013).

The first standard focuses on instructional technology concepts. This standard deals with "teacher's knowledge, skills, and understanding of instructional technology concepts" (Hawkins, 2013, p. 39). Teachers need to be proficient in the instructional technology terminology. Teachers also need to be proficient with technology when it comes to online instruction.

The second standard deals with the nuts and bolts of online teaching and learning methodologies. According to Hawkins (2013), ".... teachers will be able to provide an active, meaningful online learning environment with prompt feedback and clear expectations, while modeling appropriate online behavior" (p. 39). Teachers will also receive awareness training concerning their

interactions of students with disabilities with emphasis on cultural differences. The training program encourages and promotes inclusive learning and cultural diversity.

The third standard deals with effective online assessments. Teachers demonstrate how they develop and implement reliable and valid online assessments. When a teacher demonstrates the three standards of online certification, they are considered capable in this area. The state of Georgia also requires teachers to complete a state test demonstrating proficiency in this area before certification is granted.

Online learning has advantages. Online learning offers students a flexible schedule. They are able to work at their own pace on their own time wherever there is internet access; it provides them with individualized learning. This is beneficial for students who have special talents that require training and performance – sports/dance/music. Students are able to recover credit for failed courses. Students also have the advantage to accelerate their learning and to graduate early if desired. A clear disadvantage to online learning is that students need to be self-motivated and want to do well. In addition, students who exhibit off task behaviors such as not staying on task often find it challenging to be engage in lengthy lessons. Too much flexibility to turn in assignments can led to students not turning in completed assignments in a timely manner. The identified lack of self-motivation and engagement along with developing students' time management skills are considered major challenges for at risk students (Archambault et al., 2010).

Struggling learners and students with disabilities have some additional disadvantages to online learning. Academic "content may require sensory or even cognitive processing that is beyond the student's abilities" (Smith & Basham, 2014, p. 127). Since vendors are responsible for

nearly 90% of the K-12 online learning market, vendors are responsible for determining the foundation for online learning content (Smith & Basham, 2014). Students with disabilities may have difficulties with web accessibility. Web accessibility is the understanding, navigating, and interacting with the web. Students may also have difficulties using the technology required for online learning. As a result, Section 508 of the Rehabilitation Act was passed. Section 508 was passed to eliminate barriers in information technology and to make available new opportunities for people with disabilities in the digital age. Section 508 focuses on "....physical and sensory disabilities (e.g., mobility concerns, deaf, blind) but do not focus on those with reading disabilities and other learning challenges" (Smith & Basham, 2014, p. 131). In order for students with disabilities to be success in online learning environments, cognitive and learning deficits need to be addressed. "Understanding current accessibility standards, tools, strategies, and other ways to determine effective alignment to students' needs is critical for teachers, students, and parents" (Smith & Basham, 2014, p. 133).

Credit Recovery

Credit recovery has many definitions. There is no federal definition or coherent definitions from states that support or encourage credit recovery programs. Students that are missing the required hours to graduate are not formally exposed or introduced to the opportunity to graduate through the credit recovery program. It is an option, but it is not presented to the students across the country the same way that the "No Child Left Behind" program was. The most common definition for credit recovery is, "a structured means for students to earn missed credit in order to graduate" (St. Andrie & McCabe, 2013, para. 2). The increase in credit recovery growth is the

result of the federal law, No Child Left Behind. The focus shifted to increasing graduation rates among high school students especially at-risk students. Several government funds support credit recovery programs. Students are able to work on recovering credit with different programs. This can be done over the summer at summer school, after school, on weekends, and at home. Students can work on credit recovery programs during the day while at school in computer labs or at night school. Different credit recovery programs require different prerequisites. Some of the more common prerequisites include an attendance requirement and a minimum number of missing credits.

The goal of a credit recovery program is to "…give students who have failed courses because of poor grades or absenteeism, or who have dropped out of school. A chance to recover the credits they have lost so that they can move on to the next grade and ultimately to graduation" (Dessoff, 2009, p. 44). The following goals that credit recovery programs target often include one of more of the following:

- Help students make up credits to meet graduation requirements
- Meet graduation deadlines
- Prepare students for state exams
- Help drop out students get back in school
- Provide educational equity for all students
- Meet budgetary concerns while trying to serve all students (iNACOL)

Regular classroom teachers who are certified in their content areas are available to help students with any questions. There are several different formats that school districts are

implementing for credit recovery programs. The three main types of credit recovery programs: fully online, blended, and in person. Some districts strictly use the fully online formats with very little direct teacher interaction. State virtual schools, school districts, and commercial vendors develop the online programs. Some districts use a blended format (i.e. face to face instruction and online instruction), while other districts still have traditional classrooms with a teacher and students.

The fully online programs allow students the opportunity to recover academic credits through software programs provided by local school districts. The local school districts determine what programs to use. The choices usually come from the district of the school, state-run virtual schools, charter schools, nonprofit consultants or for-profit consultants (St. Andrie & McCabe, 2012). The program can be completed at home or in school computer labs. There are little face to face meetings or real time instruction. There is little to no supervision for this type of credit recovery programs.

The blended program mixes online learning with face to face learning. The instructors may be certified teachers or proctors who provide assistance when needed. Some blended programs do offer some real-time instruction. The programs vary in what they offer since there are no federal or state guidelines provided.

The in-person program resembles the classes held during summer school. This is more of a traditional setting with no online learning. In person, classes are usually offered in the summer with concentrated course work, or take place after school or a couple of nights a week during a semester.

Some public school districts are requiring students to be paired with adult mentors. These adult mentors do not necessarily have to be teachers. The adult mentors' main responsibility is to provide assistance to students that are enrolled in online credit recovery courses. "Mentors act as liaisons between online instructors and students, and help coordinate the other in-person resources, like tutoring with subject-specific teachers" (Plummer, 2012, p. 21).

According to Eddy and Ballenger, (2016), using credit recovery courses to recover credit increased the probability of graduating from high school versus dropping out, moving, or staying enrolled in high school. When freshman students used credit recovery, their probability of advancing to 10th grade increased from 14% to 39% (Eddy & Ballenger, 2016). When sophomore students used credit recovery, their probability of advancing to 11th grade increased from 9% to 40% (Eddy & Ballenger, 2016). Students who did not advance to the 12 grade and did not use credit recovery courses had an 8% probability of graduating. Students who did not advance to 12th grade and did use credit recovery courses had a 23% probability of graduating.

Credit recovery programs offer many benefits to students. Students are able to complete the course content at their own pace wherever and whenever they want (Dessoff, 2009). The curriculum meets state and district requirements for graduation. The assignments are geared for the different learning styles. In Georgia, two options are available for students. In "… the Georgia Department of Education credit recovery program, students complete courses with limited teacher involvement, using Flash video presentations and Web-based learning activities" (Dessoff, 2009, p. 46). The other option, the Georgia Virtual School's teachers instruct the students using synchronous online courses (Dessoff, 2009). Students are able to work at their own pace in the

labs, and the teachers are there to assist them if needed. The school system uses Education 2020 (E2020) to address their credit recovery needs. There are some definite disadvantages to online credit recovery classes. There is very little data available on the rigor or the effectiveness of the credit recovery program. High school teachers are usually only certified in one or two subject areas. Their knowledge of multiple subject areas is limited. This often makes it difficult for them to answer questions on subject areas outside their area of certification. For example, a math teacher typically would not possess the same knowledge about photosynthesis as a science teacher, and therefore, would not be able to answer the question in a credit recovery course that they facilitate. In Georgia Virtual School's credit recovery program, individual schools provide a facilitator for the credit recovery courses. States and school districts decided how the credit recovery credit is recorded on students' transcripts. The credit recovery credit can be entered as a complete replacement grade, an additional grade, or an average of the two grades. This can skew students' transcripts and raises questions of fairness. The credit recovery program run by Georgia's Virtual School requires a second grade to appear on students' transcripts to indicate this is a credit recovery course. The level of government scrutiny is almost nonexistent. There is not any state or federal government organization making sure the content taught is following the academic curriculum established by the Department of Education for states. Currently school district leaders are the only group of people scrutinizing the content of the credit recovery courses.

Edgenuity is an educational software company which is based in Phoenix, AZ. Edgenuity is the company that develops and sells E2020 to school districts. Edgenuity has been providing educational online programs since 1998. The courses that Edgenuity developed meet state and

national standards that also include the curriculum content for the Common Core Standards and iNACOL standards. These courses include "...instruction, readings, assignments, and multimedia resources with embedded scaffolds, intended to help all students meet the challenges of modern, rigorous educational standards" (Costa-Guerra & Costa-Guerra, 2015, para. 6). Education 2020 (E2020) has several unique components for students. The learning environment is self-paced. A pretest with a prescription allows students to spend less time on content they have mastered with more time spent on learning un-mastered material. If students demonstrate mastery of content, then they can take an exam to test their content knowledge. The courses are tailored to match state and district requirements. School districts and teachers are able to choose what standards need emphasis. Assignments and projects can be customized to individual student's needs. Teachers and administrators can assign, monitor, and assess students' progress through management, tracking, and reporting tools, which are available through Edgenuity (Eddy & Ballendger, 2016). This allows teachers the ability to provide students with a strong foundation for future courses.

Universal Design Learning (UDL) is the framework that teachers use to guide instructional planning and practice (Smith & Basham, 2014). The universal design for learning (UDL) is the framework that Edgenuity also uses when developing their courses. "UDL is based on research in the learning sciences that guides the development of flexible learning environments to accommodate individual learning differences" (Costa-Guerra & Costa-Guerra, 2015, para. 6). Creating a curriculum that provides the following principles is the basis for the UDL framework.

- "Multiple representations to give learners various ways of acquiring information and knowledge.

- Multiple ways of expression to provide learners alternatives for demonstrating what they know.
- Multiple ways to engage students to tap into learners' interests, challenge them appropriately, and motivate them to learn" (Costa-Guerra & Costa-Guerra, 2015, para. 8).

E2020 does incorporate these principles when developing their courses. E2020 courses provide students with audio, visual, and at times tactile learning tasks. Students are then given opportunities to practice and demonstrate their acquired knowledge in various formats.

The scaffolding and sequencing designed that E2020 uses in developing their courses are based on Bloom's Taxonomy of learning which is based the levels of intellectual behavior important to learning (Sosniak, 1994). Students progress from the knowledge level to higher levels of thinking and learning. These are the synthesis and evaluation levels. Students are able to apply and demonstrate the knowledge that they have acquired through the sequencing of lessons. Students who are attending credit recovery programs are lacking the credits needed to graduate. These students may be attending a traditional school during the day and are recovering credits either at night or in a computer lab during the day.

The Difference between Credit Recovery and Alternative School

Alternative high schools and credit recovery programs do share a common goal. Their common goal is to prevent students from dropping out of school and encourage students to graduate with a high school diploma.

Distinctions between alternative high school programs and credit recover programs are difficult to define. There is no single definition for alternative schools. Alternative school

programs are developed and implemented for a variety of reasons. Students attending alternative high schools are looking for ways to earn the required credits in order to graduate with a high school diploma. Alternative high school programs are targeting students who want to learn in a nontraditional brick and mortar school setting.

Alternative Programs in a West Georgia School System

The School System has several alternative programs available to high school students who want to obtain a high school diploma without sitting in a traditional classroom setting. These alternative programs are currently available to students in the School System: Performance Learning Center (PLC), Ombudsman (i.e. alterative school, night school, and project graduation), and Virtual Academy. These alternative programs have several common elements. High school students are able to earn the required credits for academic and elective courses in order to obtain a regular high school diploma. Also, these alternative programs allow students to work at their own pace or at an accelerated pace on their own time. All of the alternative programs in the school system are provided to the student at no cost. The one common element in all of these programs is that E2020 is the online learning component. The degree that E2020 is used in the programs varies.

There are several differences among the alternative school programs in the school system. The main difference among these programs is the admission or entrance criteria. For the PLC program, students are required to take a placement test. Students need to score at least a 70 or higher on reading and math. If they do not take a placement test, an End of Course Test score of 70 or high is required for either Literature or Math. The application packet for the PLC includes

discipline, attendance, and two teacher recommendations. Students attend this program from 9:00 am - 3:15 pm daily.

Ombudsman (OMB) is the alternative school where the Principal for disciplinary reasons refers students. In the school system, alternative schools "… serves students who have been referred to the alternative setting through a tribunal, have been adjudicated or have returned from a Youth Detention Center, or have enrolled from another school district in which the student was served in an alternative school setting but did not complete the alternative assignment" (DCSS, 2016, para. 3). Students attend class 3 hours a day working on a predetermined course(s). OMB and the school's graduation coach select the courses. Students who attend OMB are placed at the alternative school for a semester or year(s). Students are eligible to return to their home schools once they have served their time.

Ombudsman (OMB) Night School is another alternative school available to students who wish to obtain their high school diploma in a nontraditional setting. Students are required to be at least 16 years old to attend. OMB night school consists of 4 mini-semesters in a school year. A student is able to start night school at the beginning of any mini-semester. During a mini-semester, students can take two academic core classes and one elective class. Students can potentially earn 12 credits a year instead of the traditional eight credits a year.

Project Graduation is another alternative program for high school students. Project graduation is a day program for students. Participation in this program is voluntary. This program is for students who have very few discipline problems. Each high school in the county has a specific number of slots. Priority is given to at risk seniors and juniors who may not graduate.

Students are required to take eight classes all year. Students attend project graduation for three hours a day.

Credit Recovery Programs in a West Georgia School System

The school system has aligned the curriculum across the district high schools. High schools in this county will not be allowed to manipulate the standards. Courses will not be amended. The courses offered are based upon graduation requirements from the State of Georgia. The academic core classes offered are Math, Science, Social Studies, and Language Arts. In addition, some CTAE courses are offered. E2020 provides teachers, students, and parents with individual reports detailing student's progress. This enables teachers to intervene when problems arise. This also allows them to monitor large groups of students. Students in E2020 receive a credit recovery course syllabus that states the expectations and protocols. In order to earn credit students are expected to follow certain criteria for completion rates. The following criteria are used:

Week 3: 16% - 17% approximately complete

Week 6: 33% - 34% approximately complete

Week 9: 50% approximately complete

Week 12: 66% - 67% approximately complete

Week 15: 83% - 84% approximately complete

Week 18: 100% approximately complete

There are certain rules and procedures that students and teachers are expected to follow:

- Students are required to have 95% attendance in order to exit the program.

- Students are expected to exhibit acceptable behavior.
- No more than four minor discipline referrals will be allowed.
- If a student does accumulate more than four discipline referrals the principal has the authority to remove the student form the credit recovery class(es).
- The students will then be placed into the traditional classroom setting to retake the course.
- Electronic devices will not be used during credit recovery classes.
- Credit recovery classrooms are not allowed to implement Bring Your Own Device, BYOD.
- Students are not allowed to keep courses open across semesters.
- The start and end dates will be aligned with the School System calendar. Fall semester will run from August through December. Spring semester will run from January through May.
- Students are required to complete assessments during one class time. Assessments will not be carried over to the next class nor will they allowed to be carried over to the next day.
- Answer checks are not allowed. Answer checks eliminate incorrect answers each time students retake a quiz/test.
- Students are allowed to use notes that they take on quizzes and tests, but notes will not be allowed on exams.
- The school system has decided to allow only three retakes on quizzes. If a student fails the quiz three times then another intervention will be implemented.
- Plagiarism is not allowed.

Teachers have clear expectations and guidelines. Teachers are required to consistently monitor completion rates and success rates of students. Teachers are to review when quizzes, tests,

exams, and attempts are completed. The teacher and student conference should take place before a student reaches their maximum number of retakes. This conference helps identify the cause and possibly come up with a solution to eliminate further retakes. Credit recovery teachers are encouraged but are not required to be certified in the content area for the courses they monitored.

The school system has certain grading weights for credit recovery courses that will be followed with no exceptions. All courses weigh at 100%. Credit Recovery teachers have the discretion of assigning the labs and additional to students. The grading weights are as followings:

- Exams - 40%
- Assignments - 30%
- Quizzes - 15%
- Labs - 10% - 15%
- Additional - 10% - 15%

The school system has set the threshold for any pretest to be 80%. This means that students who master 80% of the content on a pretest maybe excluded from that unit of instruction in the course.

The school district in West Georgia that is the location for this research does not allow students the option for credit completion during the school year or during summer school. Credit completion is when students did not satisfactorily pass a course with a grade of 70. If the final course grade is between 65 – 69, students will not be allowed to use credit completion as an option to earn a passing grade unless they have met the credit recovery criteria or the traditional method as outlined by this School System. Students who take online credit recovery classes are still

required to take “End of Course Assessments”. These state “End of Course Assessments” measure students' proficiency on certain core academic content areas. Students have to demonstrate a certain level of proficiency in order for them to pass the class and earn credit for the class.

According to this School System Guideline, “It is expected that each credit recovery course is completed over a minimum offering of 90 seat hours per semester during the regular school year or completed over 28 summer school days” (K. Carr, personal communications, July 12, 2016).

CHAPTER THREE: METHODS

Overview

The purpose of this predictive correlation study was to examine if the variables of student engagement predicted the criterion variable of pass/fail rate of the student. A series of logistics regressions was used for this study because the researcher was investigating the relationship between two predictive variables against a dichotomous criterion variable. Chapter 3 includes the study's design, research questions, hypothesis, participants, survey setting, and procedures for survey and data analysis of survey.

Design

A correlational predictive design was used for this research study. This design was chosen because it examined the relationship between the predictor variables and the criterion variable. In this study, the predictor variables were high school students' negative and positive engagement scores. The criterion variable was the pass/fail rate of a credit recovery course. This study further examined the relationship between engagement and pass/fail rate of a credit recovery course regarding gender (e.g. high school female student engagement and high school male student engagement scores). The research design predicted the outcome of the relationship between the variables. The design does not show cause and effect. The research design was appropriate because the researcher was trying to "determine the correlation between a criterion variable and a predictor variable" (Gall, Gall, & Borg, 2007, p. 353).

Research Questions

The following research questions were proposed:

RQ1: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for high school students?

RQ2: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for female high school students?

RQ3: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for male high school students?

Hypotheses

$H_0$1: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores for high school students.

$H_0$2: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores for female high school students.

$H_0$3: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores for male high school students.

Participants and Setting

Population

The participants for the study were a convenience sample of high school students from two public high schools west of Atlanta, Georgia during the 2017-2018 School Year. This section of west Atlanta is considered rural and low income. One high school is Title 1. This study included eleven credit recovery classes at the high schools. The students were registered for the credit recovery class(es) by their high school counselor.

Sample Size

The total sample size for this study was 49 participants which is less than the recommended number. According to Gall, Gall, and Borg (2007), the recommended sample size required for a medium effect size with statistical power of .7 at the .05 alpha level is 66 participants. The low sample size was due to the fact that the students from the credit recovery course already had poor study habits and failed to return their signed permission slips. At least two dozen students wanted to take the survey to get the gift card but they failed to return the permission slips even though the researcher visited their class to solicit participants and answer questions five different times. This study included a total of 30 males and 19 females. Four students were 9th graders, eight students were 10th graders, 16 students were 11th graders and 21 students were 12th graders. The number of credits earned determines their grade level. To be placed in 10th grade eight credits were required. To be placed in 11th grade 15 credits were required, and to be placed in 12th grade 17 credits were required. Fourteen students were self-identified as Caucasian, 26 students were African-American,

and nine students were Hispanic. The total sample size of N = 49 was used for this study. This was considered a small sample size.

Male Sample Size

The total sample size of males for this study was 30 participants. Three male students were 9th graders, 6 male students were 10th graders, 10 male students were 11th graders, and 12 male students were 12th graders. The number of credits earned determines their grade level. To be placed in 10th grade eight credits were required. To be placed in 11th grade 15 credits were required, and to be placed in 12th grade 17 credits were required. Ten male students were self-identified as Caucasian, 15 students were African-American, and 5 students were Hispanics. The total sample size of male students was N = 30. This is considered a small sample size.

Female Sample Size

The total sample size of females for this study was 19 participants. One female student was a 9th grader, 2 female students were 10th graders, 6 female students were 11th graders, and 9 female students were 12th graders. The number of credits earned determines their grade level. To be placed in 10th grade eight credits were required. To be placed in 11th grade 15 credits were required, and to be placed in 12th grade 17 credits were required. Five female students were self-identified as Caucasian, 11 students were African-American, and 4 students were Hispanics. The total sample size of female students was N = 19. This is considered a small sample size.

Instrumentation

The Motivation and Engagement Scale – High School (MES-HS) is a multidimensional student self-reporting questionnaire developed by Martin (Fredricks et al., 2011). This instrument

was purchased from Lifelong Achievement Group for a small fee. The purpose of the instrument is to measure positive student engagement. It "measures high school students' (12 – 18 years) motivation and engagement" (Lifelong Achievement Group, 2012, para. 4). Martin developed "assessment and workbook tools to assess and enhance students' academic motivation and engagement" (Lifelong Achievement Group, 2012, para. 5). According to Fredricks et al. (2011), the developer "integrated a large body of research on student motivation and engagement into single framework of practical use to educators" (p. 36). The research was used in numerous studies (Bodkin-Andrews, Denson, & Bansel, 2013; Nagabhushan, 2012; Plenty & Heubeck, 2011).

The MES-HS is a valid instrument. The instrument was normed on 33,000 students. "Confirmatory factor analyses has been conducted to demonstrate construct validity of the 11 subscales. Analysis demonstrates significant correlations with achievement and other academic outcomes, showing criterion-related validity" (Fredricks et al., 2011, p. 37). The mean Cronbach's α for the 11 subscales on the high school version is .79. This is considered a reliable instrument.

The MES-HS is comprised of 11 subscales. The following six subscales measures positive motivation and engagement: self-belief, learning focus, valuing school, persistence, planning, and task management. The other five subscales measures negative motivation and engagement. These subscales are self-sabotage, disengagement, uncertain control, failure avoidance, and anxiety. The subscales are further divided into positive engagement and negative engagement. The positive engagement questions focused on self-belief, persistence, planning, and task management. The negative engagement questions focused on self-sabotage and disengagement. There are four items

on each subscale. The total number of questions on the survey is 44. The total number of questions focusing on engagement were 24. The total scores create an individual profile for each student showing positive motivation, negative motivation, positive engagement, and negative engagement. Students are asked to complete each question on the survey. There are no reverse items. There are no right or wrong answers. The researcher combined the engagement subscales scores to determine the overall positive global engagement score and overall negative engagement score. The more engaged a student is in school the higher or more positive the engagement score is. It is expected that a positive global engagement profile will reflect a higher passing rate for student credit recovery classes. A higher overall negative global engagement score indicates that a student is more likely to fail. The positive and negative motivation scores were not included in the calculation of engagement scores.

The MES-HS used a seven-point Likert scale that ranged from strongly disagree to strongly agree. The response scale ranges from 1 (strongly disagree) to 7 (strongly agree) for the high school version. The students' answers to the four items for each area are then aggregated and converted to a raw score out of a 100, then to a norm score (Motivation Quotient Score – MQ Score) and a Grade between A and D which is based on the number of Standard Deviations below or above the mean score of the norming sample. A test user manual, student score sheet, and data entry template is provided. The MES-HS can be administered by teachers, psychologist, counselors, and researchers. The questionnaire can be administered in small groups or individually. The self-reporting questionnaire can be completed with paper and pencil or web-based. If needed, the administrator can read the questions. Students will have approximately 20 to

30 minutes to complete the survey. No specific training or instruction is required to administer the instrument. Guidelines are included with the survey.

The researcher purchased the MES Pack at a discounted rate for research students. The MES Pack includes the MES scale, a user manual, scoring and profile template sheets, a data entry template, and testing guidelines from Lifelong Achievement Group for a small fee.

Procedures

The researcher obtained approval from the Associate Superintendent of Student Services to conduct the research study in two of the high schools. The researcher also obtained Institutional Review Board (IRB) approval to conduct the research study (see Appendix A for IRB approval). Once IRB approval and approval from the Associate Superintendent had been secured, the researcher contacted the high school principals explained the purpose of the study and obtained their approval and support. After principal approval was obtained, the researcher contacted the Credit Recovery teachers and discussed the study and gained their support.

The researcher gave students who were enrolled in credit recovery classes a solicitation letter along with the consent and assent letters for their parents'/guardians' review for approval to participate in the survey (See Appendices B & C). The solicitation letter described the survey and included the dates, times, locations, and contact information. The students interested in completing the survey returned the signed consent and assent letters to the researcher in a locked drop off box in the credit recovery classrooms. The self-reporting questionnaire was given to the students who returned signed consent/assent forms. The students who did not participate were instructed to continue to work on their current assignments. The researcher began the survey in a classroom

setting. The researcher gave a brief introduction. The researcher reviewed the purpose of the survey. The students were given instructions on how to properly complete the survey. The researcher reviewed the sample questions with the students to make sure they understood how to complete the survey. The students were instructed to approach the researcher if they had questions before, during or after the survey. The researcher distributed pencils and questionnaires to the students. When the students completed the surveys, they placed the surveys into a box on the desk. The students were thanked for their participation and given their Chick-fil-A gift card. The completed questionnaires were collected from the box on the desk. The completed surveys were collected and coded to ensure confidentiality of the participants. As students were given the surveys, their names were replaced with a code (i.e. 001, 002). This code allowed the researcher to match the student survey with their grades. The questionnaires were scored per instructions in the scoring manual. The school system uses the computer management program, Infinite Campus, to manage student information (i.e. demographics, and grades). The researcher obtained the students' grades from the credit recovery teachers. The students' final grade from their credit recovery course was coded to ensure confidentiality. The researcher matched the students' surveys with grades from their online credit recovery course(s). The data analysis was conducted, and results were compiled with findings and distributed to the schools and the Associate Superintendent of Student Services.

Data Analysis

A series of logistics regressions was used for this study because the researcher investigated the relationship between two predictive variables against a dichotomous criterion variable. Three

separate logistics regressions were conducted. The first logistics regression examined a predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables (negative and positive) of student engagement scores for high school students. The second logistic regression examined predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables (negative and positive) of student engagement scores for male high school students. The third logistic regression examined predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables (negative and positive) of student engagement scores for female high school students.

The criterion variable "y" for this equation was pass/fail rate of the online credit recovery class. Dummy variables were used for coding where 0 = fail and 1 = passed. The predictor variables are negative student engagement and positive student engagement, which are continuous. The data was first be screened for data inconsistences. The researcher did not identify data outliers on the quantitative predictor variables. The assumptions for logistic regression made certain that the criterion was dichotomous.

The distribution of scores on the criterion variable is a highly important factor in logistic regression. Warner (2013) meaningful results may not be obtained if the proportion of the two groups in the criterion variable deviate greatly from a 50/50 split. The number of participants must be large enough to provide a robust statistical analysis.

Binary logistic regression was used to address goodness of fit of the models outputted. The Omnibus Tests of Model Coefficients returned a Chi-square value to see if the null model or

constant-only model was statistically significant at the 95% confidence level. Results from Nagelkerke's R^2, Cox and Snell's R^2 and Hosmer and Lemeshow test were used to address models' fit to survey data.

CHAPTER FOUR: FINDINGS

Overview

High school students from rural and low income schools located in West Georgia agreed to participate in this research study to help determine if their engagement level affected their ability to pass or fail a credit recovery course. The dichotomous dependent variable "Grade" was comprised of two categories "pass" and "fail." The predictor variables were positive engagement and negative engagement. A binary logistic regression analysis was conducted to see if a predictive relationship existed between the predictor variable and outcome variable.

Research Questions

RQ1: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for high school students?

RQ2: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for female high school students?

RQ3: How accurately can the pass or fail rate of a credit recovery class be predicted from student engagement scores for male high school students?

Null Hypotheses

$H_0$1: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores (negative and positive) for high school students.

$H_0$2: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores (negative and positive) for female high school students.

$H_0$3: There is no significant predictive relationship between the outcome variable (pass/fail rate of a credit recovery course) and the predictor variables of student engagement scores (negative and positive) for male high school students.

Descriptive Statistics

Students attending credit recovery classes in West Georgia area high schools participated in this research study during the 2017 - 2018 School Year. The sample size from this population of students was 49 students. Thirty-nine percent of the participants were female (19) students and sixty-one percent (30) were male students. The students' level of engagements were measured using a series of questions. An example of a negative engagement question was, "I sometimes don't study very hard before exams, so I have an excuse if I don't do so well." An example of a positive engagement questions was, "When I study I usually try to find a place where I can study well." A higher score for positive engagement was good, but it was the opposite for negative engagement. A lower score on the negative engagement was considered better. The grading system for positive engagement according to the Motivation and Engagement Scale (Lifelong Achievement Group, 2012) was based on the following:

Positive Engagement

- A-grade was excellent, showing strength - Score equal to or greater than 115
- B-grade was good and can grow into an area of strength - Score between 100 and 114

- C-grade was telling students that some extra work is needed - Score between 85 and 99
- D-grade was telling the students that relatively more work was needed - Score equal or less than 84

Negative Engagement

- A-grade was excellent, showing strength - Score equal to or less than 85
- B-grade was good and can become an area of strength if reduced - Score between 86 and 100
- C-grade was telling students that some extra work was needed - Score between 101 and 115
- D-grade was telling the students that relatively more work was needed - Score equal to or greater than 11

As shown in Table 1 the average score for positive engagement for all students was 106.51, and the average score for negative engagement was 98.69 for all students. This would indicate that the average grade for students positively engaged was an "A" whereas the average score for students negatively engaged was marginally a "B" and an indicator that extra work may be needed. The average score for positive engagement was 107.89 and the average score for negative engagement was 99.53 for female students. The average score for positive engagement was 105.63 and the average score for negative engagement was 98.17 for male students.

Table 1

Positive and Negative Engagement Scores

Students	N	Positive (SD)	Negative (SD)	Positive M	Negative M
All	49	14.03585	18.04647	106.5102	98.6939
Female	19	14.61694	14.46209	107.8947	99.5263
Male	30	13.8352	20.2111	105.6333	98.1667

Results

Results for Null Hypothesis One

A binary logistic regression was performed using SPSS Statistics to determine the effects of positive and negative student engagement scores on the pass/fail rate of credit recovery classes. The assumptions for logistic regression made certain that the criterion was dichotomous. The distribution of scores on the criterion variable was a highly important factor in logistic regression. Warner (2013) meaningful results may not be obtained if the proportion of the two groups in the criterion variable deviate greatly from a 50/50 split. The sample size consisted of 49 high school students. Twenty six students passed and twenty three students failed which was a 53% pass rate and a 47% failure rate. The two groups in the criterion variable did not deviate greatly from the 50/50 split. Thus, the assumption was met.

A binary logistic regression analysis was used to test the relationship between the predictor variables and the outcome variable at a 95% confidence level. The results of the binary logistic regression were not statistically significant, $\chi^2(8) = 14.03$, $p = .08$. The model had a medium effect size according to Cox and Snell's ($R^2 = .061$) and Nagelkerke's ($R^2 = .081$). The model did not hold, and there was no statistically significant, predictive relationship between outcome variable students' (pass/fail rates) and the predictor variables (positive and negative engagement scores). Thus, the null hypothesis cannot be rejected.

Results for Null Hypothesis Two

A binary logistic regression was performed using SPSS Statistics to determine the effects of positive and negative student engagement scores on the pass/fail rate of credit recovery classes.

The assumptions for logistic regression made certain that the criterion was dichotomous. The distribution of scores on the criterion variable was a highly important factor in logistic regression. Warner (2013) meaningful results may not be obtained if the proportion of the two groups in the criterion variable deviate greatly from a 50/50 split. The sample size consisted of 19 female high school students. Nine female students passed and ten female students failed which was a 47% pass rate and a 53% failure rate. The two groups in the criterion variable did not deviate greatly from the 50/50 split. Thus, the assumption was met.

A binary logistic regression analysis was used to test the relationship between the predictor variables and the outcome variable at a 95% confidence level. The results of the binary logistic regression were not statistically significant, $\chi^2(8) = 10.99$, $p = .20$. The model had a medium effect size according to Cox and Snell's ($R^2 = .001$) and Nagelkerke's ($R^2 = .001$). The model did not hold and there was no statistically significant predictive relationship between outcome variable students' (pass/fail rates) and the predictor variables (positive and negative engagement scores). Thus, the null hypothesis cannot be rejected.

Results for Null Hypothesis Three

A binary logistic regression was performed using SPSS Statistics to determine the effects of positive and negative student engagement scores on the pass/fail rate of credit recovery classes. The assumptions for logistic regression made certain that the criterion was dichotomous. The distribution of scores on the criterion variable was a highly important factor in logistic regression. Warner (2013) meaningful results may not be obtained if the proportion of the two groups in the criterion variable deviate greatly from a 50/50 split. The sample size consisted of 30 male high

school students. Seventeen male students passed and thirteen male students failed which were a 57% pass rate and a 43% failure rate. The two groups in the criterion variable did not deviate greatly from the 50/50 split. Thus, the assumption was met.

A binary logistic regression analysis was used to test the relationship between the predictor variables and the outcome variable at a 95% confidence level. The results of the binary logistic regression were not statistically significant, $\chi^2(8) = 15.32$, $p = .20$. The model had a medium effect size according to Cox and Snell's ($R^2 = .192$) and Nagelkerke's ($R^2 = .053$). The model did not hold and there was no statistically significant predictive relationship between outcome variable students' (pass/fail rates) and the predictor variables (positive and negative engagement scores). Thus, the null hypothesis cannot be rejected.

CHAPTER FIVE: CONCLUSIONS

Overview

This research was conducted to bring attention to the needs of students that failed classes but were given another chance by taking a credit recovery course. There was not a great deal of research in the area of positive and negative engagement pertaining to the effect on the success of a student's ability to pass a credit recovery course. If specific areas were identified, then the findings could possibly improve student's engagement and ultimately help them stay in school and graduate.

Discussion

The purpose of this correlational predictive design was to examine the relationship between Finn's Conceptual Framework of Engagement and the pass/fail rate of high school students who took a credit recovery course.

Student engagement has been identified as a vital component for drop out intervention programs. This study was conducted to demonstrate that a student's positive engagement in high school would improve their chances of passing a credit recovery course whereas, a student's negative engagement in high school reduced his or her chances of passing a credit recovery course. Ultimately, this study introduced a focus on the ability to predict if a student was inclined to pass or fail a credit recovery course depending on their engagement in high school, which was a new concept among researchers, principals and policy makers.

An agreed-on definition for students' engagement with school does not exist (Hazel, Vazirabadi, & Gallagher, 2013). The terminology that researchers used to conceptualize engagement was different among researchers. Christenson and other researchers emphasized

"engagement is located within students" (Hazel, Vazirabadi, & Gallagher, 2013, p. 689). Fredericks and other researchers "emphasize engagement with the school context" (Hazel, Vazirabadi, & Gallagher, 2013, p. 689). It was extremely important to understand these facts so that this research could promote the concept of the effect of engagement and students' academic performance in credit recovery courses. The term engagement typically meant assisting the student to become more positively engaged. There was also a need to recognize and identify negative engagement and develop methods to reduce negative engagement. Negative engagement was not merely the plight of a few outlier students in the classroom. In the early grades, eight out of 10 students were engaged. By middle school, the number was six out 10, and then four out of 10 in high school, according to a 2013 Gallup poll (Gallup, 2018). "The drop in student engagement for each year students are in school is our monumental, collective national failure," said Brandon Busteed, Executive Director of Gallup Education (Gallup, 2018). The students who needed credit recovery does overlap the students who were considered at risk.

Research Question One (All Students)

The research question examined how accurately the pass or fail rate of a credit recovery course could be predicted from student engagement scores for all high school students. The null hypothesis stated that student engagement was not able to significantly predict the pass or fail rate of a credit recovery course for all students. This research did not support previous research studies that indicated student engagement as a predictor of student achievement and behavior in school. "Over the past two decades, students' engagement at school has emerged as a critical factor across

hundreds of dropout prevention and recovery programs in the United States" (Klem & Connell, 2004).

Research Question Two (Female Students)

The research question examined how accurately the pass or fail rate of a credit recovery course could be predicted from student engagement scores for female high school students. The null hypothesis stated that student engagement was not able to significantly predict the pass or fail rate of a credit recovery course for female students. This research did not support previous research studies that indicated student engagement as a predictor of student achievement and behavior in school. Research has shown that the level of engagement and academic performance may be significantly different when considering gender. Females achieved higher levels of engagement than males (Wang, Willett, & Eccles, 2011). Overall, studies have shown that female students are more engaged than male students in high school. Female students exhibited less behavioral problems and possessed better communication skills, which may attributed to more participation in classroom activities and in other areas of engagement. Female high school students performed better academically, and were more likely than male high school students to graduate (Lietaert, Roorda, Laevers, Verschueren, & De Fraine, 2015). The results of this research contradicted previous studies based on academic performance and graduation rates, but this is based on females in credit recovery courses, not females from the entire school. No current research was available that predicted female high school students' performance in a credit recovery course based on student engagement. The expectation was that females typically were more engaged, and therefore, would perform better in the credit recovery courses. The female students

that participated in this research did have higher levels of positive engagement, but also had slightly higher levels of negative engagement than males that participated in this study. The female students also had a higher percentage of failures than male students which contradicted previous research studies. This research failed to reject the null hypothesis.

Research Question Three (Male Students)

The research question examined how accurately the pass or fail rate of a credit recovery course could be predicted from student engagement scores for male high school students. The null hypothesis stated that student engagement was not able to significantly predict the pass or fail rate of a credit recovery course for male students. This research did not support previous research studies that indicated student engagement as a predictor of student achievement and behavior in school. The results of this research contradicted previous studies based on academic performance and graduation rates such as "High engagement during tasks in high school classrooms has been a significant predictor of continuing motivation and commitment as well as overall performance in college" (Shernoff & Hoogstra, 2001, p. 74). Among high school students who considered dropping out, half stated lack of engagement with the school as a primary reason, and 42 percent report that they don't see value in the schoolwork they were asked to do. Finally, Finn and Rock (1997) analyzed data from the National Educational Longitudinal Study of 1988 and focused on low-income minority students in grades 8 through 12 (N = 1,803). Finn and Rock (1997) found that students who displayed engagement as measured by coming to class on time, being prepared for and participating in class work, and making the effort to complete assignments and homework were more likely to be academically successful, have passing grades throughout high school, and

graduate on time. Finn and Rock (1997) were able to significantly predict the performance of high school students based on their level of engagement (for this research the assumption was positive engagement reflects better academic performance). Based on the outcome of this research the null hypothesis for male students was not rejected.

Implications

This research study contributes to the existing knowledge of student engagement. Numerous research studies have been conducted on student engagement. Previous research studies show a link between student engagements and completing high school (Yazzie-Mintz, McCormick, (2012); Finn & Rock, (1997); Klem & Connell, (2004); Archambault et al. (2009). This research study examined the gender gap concerning student engagement. Lietaert et al. (2015) stated males typically have lower grades, higher dropout rates, and lower engagement levels when compared to females. The current research study did support the findings of Lietaertet et al. (2015) concerning the gap in levels of student engagement.

This is the first known study that examines the link between student engagement and credit recovery courses. Specifically using Finn's Conceptual Framework of student engagement and how it relates to the pass/fail rate of a credit recovery course. In other words, can the pass/fail rate of a credit recovery class be predicted from the different levels of student engagement? This study will add to the limited knowledge base of credit recovery courses in regards to student engagement.

Not having a standard definition for student engagement and credit recovery does make it difficult to know if researchers are accurate when comparing one research study to another. There has been a major shift from a one-dimensional definition to more multidimensional definitions.

Again, it is difficult to compare one study to another when there is no uninform acceptable definition. There are as many definitions of credit recovery as there are programs available to schools. There is not a federal definition or a single definition that is used by states. According to Li and Learner (2012), "Over the past 10 years, the major shift in the school engagement literature is the move away from one-dimensional definitions (mostly behavioral ones), to more multidimensional notions of engagement" (p. 21).

Limitations

The research study could have been affected by several factors. First, the sample size is small, which can reduce the significance of the predictive variables. This can affect the ability to accurately predict a student's ability to pass or fail a credit recovery course based on their level of engagement. The subgroups are also considered a small sample size. The small sample size is smaller than is normally required. The total sample size for this study was 49 participants which is less than the recommended number of 58. The reason why the sample size was less than 58 is because the students in the credit recovery course failed to return signed permission slips. At least two dozen students wanted to take the survey to get the gift card, but they failed to return the permission slips even though the researcher visited their class to solicit participants and answer questions five different times. The female participants may have the tendency to want to please the researcher. As a result of the number of male and female participants, the responses on the survey could skew the engagement scores. Some of the male students may have done the same, which would reduce the predicative ability of the negative and positive engagement variables. Almost every student who was eligible to participate took a permission slip home for parent/guardian

signatures. Only 26% of the students returned signed permission slips. Typically, students who are more positively engaged are more likely to return signed permissions slips. Several students asked and wanted to participate in the survey, but were not able to since they did not return signed permission slips. Their main reason for not returning the permission slips were that they kept forgetting to get them signed. The students already had a tendency to display negative engagement traits so they did not participate in the survey. The students that did participate would typically be your better students in the credit recovery class. These students may have demonstrated higher positive engagement scores, which would have given a stronger significance value for the ability to predict passing rates. The values for female positive engagement were higher than the negative engagement, which contradicts the pass fail rate thus reducing the ability to accurately predict pass or fail rates. Typically, if a student is positively engaged, they would more than likely pass but the female scores did not reflect the overall average for passing. Students may have been influenced by the incentive that was offered for their participation in the survey. Students may not have participated in the survey because they did not like the restaurant gift card that was chosen as the incentive.

Ultimately, all of the previous research on student engagement found that positive engagement leads to better academic performance. Student engagement should have been a significant predictor for the ability to pass a credit recovery course, but the students in a credit recovery program may already have problems with positive engagement since they are not performing well academically.

Recommendations for Future Research

There are several recommendations for future research in the area of student engagement and credit recovery courses:

1. This research could be duplicated using a larger sample size for female and male high school students.
2. Future research could include if different levels of engagement are evident for students that take more than one credit recovery course.
3. Future research could look at the race, age, and economic levels of students to see what affect economic status has on credit recovery courses.
4. Future research could look at the different levels of engagement between regular educations students, students identified with disabilities, and students identified as gifted.
5. The teacher that facilitates the credit recovery course could help administer the survey and work with the researcher to get more students interested in taking the survey. The students are more familiar with their credit recovery teacher and may feel more comfortable taking the survey.

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Appendix A: IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

September 20, 2017

Tara Lynn Douds
IRB Approval 2893.092017: The Predictive Relationship between Student Engagement Scores and Pass/Fail Rates of a Credit Recovery Course among High School Students

Dear Tara Lynn Douds,

We are pleased to inform you that your study has been approved by the Liberty University IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project. Sincerely,

LIBERTY
UNIVERSITY.
Liberty University | Training Champions for Christ since 1971

Appendix B: Consent form for the Parent/Guardian

PARENT/GUARDIAN CONSENT FORM

THE PREDICTIVE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT SCORES AND PASS/FAIL RATES OF A CREDIT RECOVERY COURSE AMONG HIGH SCHOOL STUDENTS

Tara Lynn Douds
Liberty University
School of Education

Your child is invited to be in a research study that examines the relationship between student engagement and the pass/fail of a credit recovery course. He or she was selected as a possible participant because he/she is enrolled in a credit recovery course. I ask that you read this form and ask any questions you may have before agreeing to allow him or her to be in the study.

Tara Lynn Douds, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to examine the relationship of student engagement. This survey is being taken by students to help determine if there is a relationship between how well students perform in the credit recovery program and how the students feel about their school, their classes, and other factors that influence their success in school.

Procedures: If you agree to allow your child to be in this study, I would ask him or her to do the following things:

1. Complete a survey, which will take approximately 10 minutes.

Your child will participate in a survey that will measure their engagement in school. Your child's survey scores will then be compared to his/her credit recovery course pass or fail rates. The comparison of student engagement with credit recovery class grades should indicate an area where we can help increase student achievement.

Risks and Benefits of being in the Study: The risks involved in this study are minimal, no more than you would encounter in everyday life. Participants should not expect to receive a direct benefit from participating in this study.

Compensation: Your child will be compensated for participating in this study. When your child completes the survey, he or she will receive a $10.00 gift card. If a student doesn't fully complete the survey, he or she will not receive their compensation.

The surveys will only be seen by the researcher. The researcher does not anticipate any future use of the data. The data will be shredded after three years.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to allow your child/student to participate will not affect his or her current or future relations with Liberty University or [Redacted] School System. If you decide to allow your child to participate, he or she is free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If your child chooses to withdraw from the study, you or your child should contact the researcher at the email address/phone number included in the next paragraph. Should your child choose to withdraw, data collected from him or her will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Tara Lynn Douds. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at (XXX) XXX-XXXX or at tara.douds@XXXXXXX. You may also contact the researcher's faculty advisor, Dr. Carolyn McCreight, at cmccreight@liberty.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd, Green Hall 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information to keep for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to allow my child/student to participate in the study.

Signature of Minor Date

Signature of Parent Date

Signature of Investigator Date

Appendix C: Consent form Student

CONSENT FORM

THE PREDICTIVE RELATIONSHIP BETWEEN STUDENT ENGAGEMENT SCORES AND PASS/FAIL RATES OF A CREDIT RECOVERY COURSE AMONG HIGH SCHOOL STUDENTS

Tara Lynn Douds
Liberty University
School of Education

You are invited to be in a research study that examines the relationship between student engagement and the pass/fail of a credit recovery course. You were selected as a possible participant because you are currently enrolled in a credit recovery course. Please read this form and ask any questions you may have before agreeing to be in the study.

Tara Lynn Douds, a doctoral candidate in the School of Education at Liberty University, is conducting this study.

Background Information: The purpose of this study is to examine the relationship of student engagement. This survey is being taken by students to help determine if there is a relationship between how well students perform in the credit recovery program and how the students feel about their school, their classes, and other factors that influence their success in school.

Procedures: If you agree to be in this study, I would ask you to do the following things:

1. Complete a survey, which should take approximately 10 minutes.

You will participate in a survey that will measure your engagement in school. Your survey scores will then be compared to your credit recovery course pass or fail rates. The comparison of student engagement with credit recovery class grades should indicate an area where we can help increase student achievement.

Risks and Benefits of being in the Study: The risks involved in this study are minimal, which means they are equal to the risk you would encounter in everyday life.

Participants should not expect to receive a direct benefit from taking part in this study.

Compensation: You will be compensated for participating in this study. When you complete the survey, you will receive a $10.00 gift card. If you do not fully complete the survey, you will not receive compensation.

The surveys will only be seen by the researcher. The researcher does not anticipate any future use of the data. The data will be shredded after three years.

Voluntary Nature of the Study: Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with Liberty University or [Redacted] School System. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

How to Withdraw from the Study: If you choose to withdraw from the study, you should contact the researcher at the email address/phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Contacts and Questions: The researcher conducting this study is Tara Lynn Douds. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at (XXX) XXX-XXXX or tara.douds@XXXXXXX. You may also contact the researcher's faculty advisor, Dr. Carolyn McCreight, at cmccreight@liberty.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board, 1971 University Blvd., Green Hall Ste. 1887, Lynchburg, VA 24515 or email at irb@liberty.edu.

Please notify the researcher if you would like a copy of this information for your records.

Statement of Consent: I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

Signature of Participant Date

Signature of Investigator