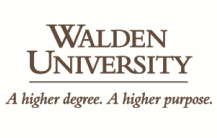

2018

Credit Recovery and Grade Point Average in an Alternative High School System

Antoinette Marie Cunningham
Walden University

Walden University

College of Education

This is to certify that the doctoral study by

Antoinette Cunningham

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Philip Griswold, Committee Chairperson, Education Faculty
Dr. Kim Nisbett, Committee Member, Education Faculty
Dr. Richard Hammett, University Reviewer, Education Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2018

Abstract

Credit Recovery and Grade Point Average in an Alternative High School System

by

Antoinette Cunningham

MA, University of Detroit Mercy, 2009

MSA, Central Michigan University, 1991

BA, University of Detroit Mercy, 2004

BBA, Davenport University, 1990

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2018

Abstract

The dropout rates of African American and Hispanic students in the United States are significantly higher than that of White students. Failure to obtain a high school diploma has adverse economic and social implications for these students and for society. The purpose of this study was to assess the relationship between a credit recovery program with key demographic variables and high school GPA, which is a graduation antecedent, for students in an alternative school. Knowles' framework of adult learning theory was used to examine how participation in the credit recovery process in a system of predominantly African American-serving alternative schools predicted GPA while accounting for the influence of student demographic variables. The ex-post facto causal-comparative design involved the analysis of an archival random sample of 168 former students, 84 of whom had taken credit recovery courses and 84 of whom had not. A multiple linear regression model (R =0.257, $F(4, 163) = 2.770$, $p = 0.029$) indicated that only gender ($\beta = 0.188$, $p = .02$) significantly predicted the students' GPA, with female students outperforming males. A conclusion is that the implementation of credit recovery programs in U.S. schools does not have any impact on students' GPA. The results suggest weaknesses in program delivery and training and that the review and revision of professional development opportunities for teachers is merited. Drawing from the extant literature, a professional development recommendation was made to improve program effectiveness based on documented best practice examples. Implications for the promotion of positive social change include the evaluation of more robust credit recovery programs capable of improving the graduation rates of U.S. Hispanic and African American students.

Credit Recovery and Grade Point Average in an Alternative High School System

by

Antoinette Cunningham

MA, University of Detroit Mercy, 2009

MSA, Central Michigan University, 1991

BA, University of Detroit Mercy, 2004

BBA, Davenport University, 1990

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

May 2018

Dedication

I dedicate this doctoral study to my three grandchildren: Princeton, Aiden, and Adam.

“Education is the most powerful weapon which you can use to change the world.”

Nelson Mandela

President of South Africa and Political Activist

Acknowledgments

I would like to acknowledge the team who assisted me along this doctoral journey. I would like to thank my supervisor for granting permission to collect data and facilitating the access to records necessary to conduct my study. I would like to thank Dr. Kim Nisbett for her reflective feedback and inspirational spirit during the various stages of the doctoral study. I would like to thank Dr. Richard Hammett for his encouragement, insightful comments, and assistance with developing a research study that not only demonstrates scholarship but has practical applications for promoting social change. I would like to express my sincere gratitude to Dr. Philip Griswold for his patience, motivation, in-depth knowledge, willingness to always go beyond the call of duty, and instilling in me the importance of presenting the results of my study at local and regional conferences. I would also like to thank June Cline for the many hours of assistance with APA and the methodological research design. I would like to thank Dr. Cheryl Mason, a wonderful colleague and mentor, who has been an invaluable resource in helping me to balance the challenges that are often presented by real life issues with maintaining a realistic writing schedule to complete the doctoral journey. Finally, I would like to thank by husband Bill, my son Tony, and my daughters April and Nakia; without their love, motivation, and unwavering commitment, the completion of a doctoral degree would just be a distant dream.

Table of Contents

List of Tables

List of Figures

Section 1: The Problem

The Local Problem

Failure to obtain a high school diploma can have economic and social implications for many members of society. Dropping out of high school has social costs reflected in higher unemployment and medical expenses, burdens for the prison system and low-income housing, and a financial dependence upon social service agencies, which makes dropout prevention a priority for public policymakers (Cabus & De Witte, 2016; Jordan, Kostandini, & Mykerezi, 2012; Rahbari, Hajnaghizadeh, Damari, & Adhami, 2014). Allowing youth to drop out of school is not a feasible option because many of these individuals struggle in terms of having a productive life as adults as a result of dropping out (Berg & Nelson, 2016; Tavakolian & Howell, 2012).

Alternative education systems were created to decrease the number of at-risk students leaving school prematurely and to serve students by using different methods than are found in traditional educational settings (Dervin & Gross, 2016; Lagana-Riordan et al., 2011; Tsang & Harris, 2016). Smith and Thompson (2014) argued that the alarming dropout rates and insignificant graduation rates, coupled with disciplinary challenges and the marginalization of students, are reflective of the ineffectiveness of the traditional school system to educate youth at risk of dropping out of school. Alternative education plans including flexible scheduling, multiple ways to earn high school credit, differentiated instruction, and personalized scheduling; these can help at-risk students achieve a high school diploma (Rennie Center for Education Research & Policy [RCERP], 2014).

Despite the federally mandated reforms of credit recovery, the 30% dropout rate in the United States has changed only minimally over the past 3 decades (Tavakolian & Howell, 2012). In addition, a disproportionate number of minority students are dropping out of school when compared to White students. National dropout rates are as follows: Hispanics (18.3%), Blacks (9.9 %), Whites (4.8 %), and American Indian/Alaska and Natives (14.6%), according to Blount (2012). In comparison, the 2013-2014 Michigan dropout rates for these major ethnic groups was Hispanic of any race (15.2 %), African Americans (17.3 %), Whites (7.31 %), and American Indian (14.29 %; Michigan's Center for Educational Performance and Information, 2014).

To address lack of change in the dropout rate, U.S. state and federal governments have increased the need for accountability in schools that offer alternative educational programs for students at risk of dropping out of school (Figlio & Loeb, 2011; Jacob, 2017; Spain & McMahon, 2016). These schools must demonstrate that their students are learning and completing their education programs for college and career readiness (Balfanz, Bridgeland, Bruce, & Fox, 2012; Martinez, Baker, & Young, 2017; Means, Wang, Young, Peters, & Lynch, 2016).

The local problem that compelled this study was Success Academies' unsatisfactory graduation rates for the 7 year-period beginning with the 2006-2007 academic year. These rates have been lower than the state of Michigan's target of 80% (Michigan's Center for Educational Performance and Information, 2014). A summary of the graduation rates is provided in Table 1.

Table 1

Graduation Data for Success Academies by School Year

School District	Historical graduation data by school year						
	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
Success Academy A	4.34%	5.17%	3.30%	7.06%	17.65%	11.22%	11.84%
Success Academy B	15.38%	4.44%	11.11%	16.90%	6.85%	22.97%	16.67%
Success Academy C	14.00%	10.64%	3.19%	6.06%	1.41%	7.14%	4.48%

Note. Data obtained from the Michigan Department of Education's (MDE's) Center of Educational Performance and Information (CEPI).

Success Academies were created for the purpose of improving high school graduation rates in Michigan. The schools were chartered as an alternative high school that offered several pathways to graduate, including credit recovery; however, the courseware data were not disaggregated to track student completion for original course credit and students who took courses for credit recovery. As such, there may be statistical differences in graduation rates of students who took credit recovery courses and those who did not.

Rationale

A public-school academy, or charter school, is categorized as an alternative school. It is a state-sponsored public school that operates under a contract authorized by a public authorizing body (MDE, 2016). These public authorizing bodies can be universities, community colleges, public school districts, or intermediate school districts (MDE, 2016). The role of the authorizer is to ensure school performance and to provide

oversight of local, state, and federal compliances and regulations (MDE, 2016). According to Great State University (GSU [pseudonym], 2017), the authorizer of Success Academies, students who attend these schools range from 16 to 22 years of age and are typically composed of at-risk youths.

Students at Success Academies can obtain their high school diploma through traditional coursework if they have not taken the courses prior to enrollment; alternatively, they can complete courses they failed in high school through credit recovery programs. According to the GSU Field Services Representative, the programs are flexible with some students completing a combination of traditional, online, or blended courses or engaging in the credit recovery process (personal communications, May 8, 2015). Credit recovery is an alternative to course repetition for students who have previously failed a course that is needed to meet the high school graduation requirements (Zinth, 2011).

Students needing credit recovery comprise a large portion of the U.S. high school population who are late in graduating or who have subsequently dropped out (Picciano, Seaman, & Day, 2011). According to Mileaf, Paul, Rukobo, and Zyko (2012), Credit recovery programs were envisioned as the solution for increasing graduation rates across the United States. No Child Left Behind legislation provided incentives to U.S. schools and districts for the implementation of e-learning programs for credit recovery (United States Department of Education [USDOE], 2001). Data about the credit-recovery programs, however, were insufficient to hypothesize a relationship between the growth of online courses for credit recovery and changes in graduation rates (Carr, 2014). McCabe and St. Andrie (2012) found that the number of students participating in credit recovery

was difficult to determine because of minimal federal oversight; additionally, some states do not segregate the number of school-level credit recovery courses from the traditional courses. There is a gap, therefore, in understanding the effects of credit recovery programs on graduation rates.

Success Academies are distinctly different from other public-school academies in Michigan. As mentioned by the GSU Field Services Representative, the target population of Success Academies is dropouts and youth who have not succeeded in traditional public-school programs (personal communication, May 8, 2015). Based on the population served by each academy, the students enroll as an already academically "failed" group of students. According to the Success Academies' superintendent, academic failure is measured by most academic and social development standards, including test scores, attendance, and graduation rates (personal communication, March 7, 2012). As a result of poor graduation rates, low achievement test scores, and lower-than-expected attendance, Success Academies were determined to be at risk by the City Public Schools Authorizer ([CPSA], Assistant General Counsel, personal communication, June 7, 2012). The CPSA representative indicated that state funding would not be allowed to support failing schools (personal communication, August 16, 2012). According to the GSU Field Services Representative, GSU decided to authorize Success Academies for a period of 7 years, effective July 1, 2013 (personal communication, April 16, 2014). Re-authorization after 7 years would be dependent upon improvement of the academies' high school graduation rate.

Another issue is the significant disparity in the graduation rates for minorities and Caucasian youth. Recent improvements in minority graduation rates have been minimal

and may contribute to rising poverty levels among minority populations (National Education Association, 2016). The graduation gap between minorities and White students can vary as much as 15% (DePaoli et al., 2015). Similarly, graduation rates for low-income students were 15% below their non-low-income peers (DePaoli et al., 2015). Moreover, approximately 90% of middle class and affluent students graduated in 4 years compared to 70% of low-income students (National Center for Education Statistics [NCES], 2015).

Alternative education and credit recovery have become key drivers for improving the graduation rates for minority youth in the United States. Within the last 10 years, alternative education has become a crucial element of state and local dropout prevention and recovery efforts (RCERP, 2014). Queen, Lewis, and Coopersmith (2011) found that over 62% of U.S. school districts participate in distance credit recovery programs. Such data about the credit-recovery programs, however, have been insufficient to hypothesize a relationship between the growth of online courses and increases in graduation rates (Carr, 2014). McCabe and St. Andrie (2012) indicated that the percentage of students enrolled in credit recovery was difficult to determine for two reasons: (a) there is minimal federal oversight, and (b) some states did not separate the school-level credit recovery courses from the traditional courses. The purpose of this study was to examine Success Academies' historical data in order to determine the relationship of credit recovery between cumulative GPA as a proxy for graduation eligibility while controlling for demographic variables of gender, socio-economic status (SES), and age.

Definition of Terms

Alternative education. This describes a separate, nontraditional program within a K–12 public school district or a public-school academy established to provide personalized educational services for students who are at risk of not graduating with their class and/or who have individual needs that are not being met in a traditional setting (MDE, 2016).

At-risk. This is a classification that relies on broad sociodemographic criteria (i.e., race, ethnicity, and social class) to predict delinquency and remediation; it refers to students who require temporary or ongoing intervention in order to succeed academically (Sanders & Jordan, 2013).

Black or *African American.* This term refers to a person having origins in any of the Black or racial groups of Africa (Office of Management & Budget, 1997).

Blended learning. This describes a combination of teacher-led and online instructional delivery (McCabe & St. Andrie, 2012).

Credit recovery. This refers to the act of retaking a shortened version of a previously failed course for the purposes of meeting graduation requirements (Zinth, 2011).

Economically disadvantaged. This term describes a student who is a member of a household that meets the income eligibility guidelines for free or reduced-price meals (less than or equal to 185% of federal poverty guidelines) under the National School Lunch Program (Clements, Stafford, Pazzaglia, & Jacobs, 2015).

Extrinsic motivation. This is the act of participating in an event for the purposes of obtaining an external outcome (Ryan & Deci, 2000).

Free or reduced-price meals. A student's eligibility for free or reduced-price meals is determined by household size and family income; this measure is frequently used as an indicator of students' socioeconomic status (Hoffman, 2012).

Hispanic or Latino. This person describes a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race (Office of Management & Budget, 1997).

Intrinsic motivation. This describes the act of engaging in an activity for self-satisfaction rather than an external consequence (Ryan & Deci, 2000).

Virtual school. This term includes any organization that offers K-12 coursework through the Internet or Web-based instruction (Chingos, 2013).

White or *Caucasian*. This term refers to a person having origins in any of the original peoples of Europe, the Middle East, or North Africa (Office of Management & Budget, 1997).

Significance of the Study

The results of this study contributed to the literature on alternative education programs in two ways. First, by using a valid and reliable research design that is grounded in quantitative research methods, the results provided data for students specifically enrolled in traditional instruction and credit recovery courses. Second, I aimed to expand existing research on the association between demographic characteristics, academic outcomes, and the method of curriculum delivery and earning a high school diploma in an alternative learning environment. I offered the research findings as an original contribution to the literature on the influence of demographic

characteristics, academic outcomes, and methods of curriculum delivery for successfully meeting the requirements to earn a high school diploma in an alternative setting.

Society can benefit from the quantitative study on the predictors of successful graduation in an alternative high school setting. A high school diploma has become the minimum precursor for the skills and education that is required in a 21st century globalized economy. Decreasing the dropout rate can contribute to the nation's economy. High school graduates are more likely to be employed, have higher taxable incomes, and aid in job generation (Child Trends, 2014; The Statistics Portal, n.d.; United States Census Bureau, 2012). High school graduates have better health and longer life expectancy (Pleis, Lucas, & Ward, 2010); in addition, high school graduates are more likely to vote. During the 2012 presidential election, 4% of people who left high school without graduating voted, compared to 24% of people with only a high school diploma and 37% with a college degree (Circle, 2012). High school graduates help contribute to America's national security because students that leave high school without a diploma are not qualified to serve in the military (Council on Foreign Relations, 2012).

The results of this study on the demographic characteristics of the students in alternative education settings could provide research to support interventions that will eliminate the disproportionate number minority of youth that have disengaged in the educational journey. Through this study, I contributed to the literature on alternative education programs by using a valid and reliable research design that is grounded in quantitative research; providing data about students specifically enrolled in traditional instruction, blended instruction, and credit recovery courses. The research findings provided an original contribution to the literature on the influence of demographic

characteristics, academic outcomes, and method of curriculum delivery, and successfully meeting requirements to earn a high school diploma in an alternative setting.

Researchers could replicate the analysis, data collection, methodology, and findings of this ex-post-facto study with a similar population to determine the influence of the variables on successfully meeting the graduation requirements to earn a high school diploma through other alternative school settings. The research findings and recommendations can provide practical application for effective interventions for students enrolled in alternative education programs.

The research findings on both the relationship between the enrollment in alternative education and graduation rates; along with the influence that demographic characteristics, academic outcomes, and method of curriculum delivery has on that relationship can provide support for the need to develop interventions that can help students meet the high school graduation requirements successfully. Enrollment in alternative schools represents a second chance at graduating from high school, as well as an opportunity for having a productive life.

Research Questions and Hypotheses

According to Michigan's Center for Educational Performance and Information (2014), Success Academies have continued to experience double-digit dropout rates since their inception in 2005. As reported by the GSU Field Services Representative, these urban alternative high school programs were designed for at-risk youth who had previously dropped out of school (personal communication, May 8, 2015). As noted by the GSU Field Service Representative, an important component of the schools' curriculum was a credit recovery resource that was delivered through computerized

courseware (personal communication, May 8, 2015). An account representative for an online courseware company, indicated that it is the technological feature of the credit recovery program that offers students an accelerated method to retake classes required for high school graduation (personal communication, January 10, 2013). According to the curriculum specialist, however, Success Academies' course completion pathways of traditional courses and/or credit recovery were recorded in the school data system as completed classes without documenting the method of curriculum delivery (personal communication, February 5, 2013). Without those data, comparing the effect of credit recovery courses was not possible.

McCabe and St. Andrie (2012) indicated that the number of students enrolled in credit recovery is difficult to determine because of minimal government regulation, and this may still be the case. Given the challenge of Success Academies to make improvements, and the lack of data on the completion of credit recovery courses, a purpose was crafted to examine the schools' historical data to determine the impact of credit recovery on cumulative GPA as a proxy for graduation eligibility. Based on the evidence supporting unsatisfactory performance, and the necessity to use a credit recovery program, a determination of what may be the causes of the poor graduation rates was deemed essential. The guiding research question was as follows: How well does enrollment in credit recovery predict cumulative GPA as representative of graduation eligibility, while accounting for the influence of student demographic factors?

In quantitative research, the testing of hypotheses is a decision-making process that compares the outcomes of values for the purpose of determining whether a difference or a relationship exists between those values (Creswell, 2012). These values refer to the

null and alternative hypotheses in this study. The following are the two hypotheses that I tested in this study:

H_{01}: Student demographic characteristics do not significantly predict student GPA (cumulative required course grades) from an alternative high school.

H_1: Student demographic characteristics significantly predict student GPA (cumulative required course grades) from an alternative high school.

H_{02}: The delivery method of the curriculum (credit recovery or not) does not significantly predict student GPA (cumulative required course grades) from an alternative high school, when controlling for student demographic characteristics.

H_2: The delivery method of the curriculum (credit recovery or not) significantly predicts student GPA (cumulative required course grades) from an alternative high school, when controlling for student demographic characteristics.

The independent variables were credit recovery status, age, gender, and socioeconomic status. The dependent variable was meeting graduation requirements, as measured with GPA. I used multiple linear regression to analyze the association between demographic characteristics and graduation; and the association method of curriculum delivery and graduation. The results of this information informed practice, provided interventions to improve graduation rates in an alternative high school, and facilitated recommendations for further research.

Review of the Literature

The graduation rate of urban minority youth is considerably higher than national and state averages. Smith and thomson (2014) acknowledged that one in every three students in the United States drops out of high school annually. The high dropout rate has

been linked with low graduation rates, indicating that the traditional school setting is not an effective environment for teaching a significant number of the students in the contemporary society. In an attempt to reduce the disparity between at-risk urban and the general student population, an alternative high school provides dropouts with a means to recover credits and graduate. At-risk students have a high likelihood of dropping out of high school in state and national schools compared to other students. In an effort to reduce this disparity, alternative high schools in the district provide at-risk students with a means to recover credits and graduate. This literature review contains the following sub-sections: theoretical framework, literature search strategy, the existence and crisis of dropout, predictors and factors contributing to dropout, alternative education for students at risk of dropping out, credit recovery, implications, and a summary of the review.

Theoretical Foundation

Motivation is regarded as a multi-faceted construct (Sha, Looi, Chen, & Zhang, 2012). From a cognitive perspective, "motivation is the process whereby goal-directed activity is instigated and sustained" (Schunk & Zimmerman, 2008, p. 4). Motivation is key to understanding factors that could be attributed to high dropout rates and provide an awareness of the complexities that are influential to the online environment (Kim & Frick, 2011). Ryan and Deci (2000) categorized motivation into two categories: intrinsic and extrinsic. Ryan and Deci added that people who are intrinsically motivated are self-encouraged to participate in activities by their own pleasure and enthusiasm. Whereas extrinsically motivated individuals are propelled to partake in events for tangible outcomes (Ryan & Deci, 2000).

Ryan and Deci (2000) developed the self-determination theory that is based on human motivation, development, and wellness. Self-determination theory is the exploration of "people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes" (Ryan & Deci, 2000, p. 68). According to Taylor, Lekes, Gagnon, Kwan, and Koestner (2012), self-determination theory posits that an individual must experience competence, which is related to efficacy and sense of control (Ryan, Curren, & Deci, 2013). Relatedness involves the development of secure and satisfying connections with others (Ryan & Deci, 2000), while autonomy is associated with volition and self-endorsement of behavior for optimal functioning (Ryan et al., 2013).

Students who are returning to school with a goal, such as graduating or attaining a general education development (GED) certificate, need to become competent and take control of their own learning (Dwyer, McCloud, & Hodson, 2012; Kronholz, 2011). The school provides relatedness through support from staff members, including teachers, administrators, and support staff. Autonomy, competence, and relatedness describe the natural, intrinsic functionalities, with satisfaction predicting both motivation and well-being (Ryan et al., 2013).

Houde (2006) examined the psychological context of adult learning through the context of current research to validate the foundation of the research that undergirds andragogy (adult learning). The motivational theory of self-determination is aligned with principles of adult learning (Houde, 2006). Houde concluded that "each principle of andragogy is supported in to some extent through examination through the lens of self-

determination theory" (2006, p. 95). Self-determination strategies support the principle that adults need to know what they have to learn as a means of remaining motivated. Understanding how adult learning is related to their goals is part of self-determination theory. This theory provides evidence that adults are independent learners and responsible for their own learning. Valuing the experience of the adult learner is a blending of the competence and relatedness needs of self-determination theory. Adult learners' intrinsic motivation for learning is an important element of self-determination theory. The innate psychological understanding of self-determination and self-motivation are the foundation for students to strive for academic success, which ultimately leads some students to graduate from high school.

Adult learning theory. Three psychological theories parallel to the three facets of andragogy: (a) the theory of learning has its underpinnings in cognitive psychology; (b) the relationship between the teacher and student are rooted in social psychological theories; and (c) the major differences between adult and child learning are supported by developmental psychology (Houde, 2006). Knowles' framework for adult learning theory is rooted in observation and experience, as opposed to empirical research or theory (Houde, 2006). Empirical evidence was supplied mainly by anecdotal evidence (Rachal, 1994), and lacked assessment to measure scientific data (Merriam & Caffarella, 1999; Pratt, 1993; Rachal, 2002).

Knowles (as cited in Ozuah, 2005) defined pedagogy as "the art and science of teaching children" (p. 83). Pedagogy emphasized the function of the educator, with the teacher deciding what, how, and when students will be taught (Bedi, 2004; Ozuah, 2005). This model is based on the principal that teaching is self-directed and places the role of

learning solely on the teacher (Knowles, 1984). This pedagogical premise, which has become the standard teaching method for both children and adults, has contributed to disengagement among adult students (Samaroo, Cooper, & Green, 2013).

The problems that teachers experienced with adult learners during the systemic organization of adult education at the beginning of the 20th century became the catalyst for developing new teaching approaches that better met the needs of adult learners (Knowles, 1984). The problems included resistance to rote memorization, lectures, frequent quizzes and examinations, assigned readings, and high dropout rates (Knowles, 1984). Knowles (1970) recognized that the pedagogical model was insufficient to meet the learning needs of adult students.

Andragogy is defined as "the art and science of helping adults learn, in contrast to pedagogy as the art and science of teaching children" (Knowles, 1970, p. 43). Kapp, Anderson, and Lindeman (as cited in Davenport, 1987) asserted that andragogy was a self-directed problem-solving model for adult learning. Knowles (1970) expanded on Lindeman's adult learning assumptions to disseminate the andragogical approach to adult education.

The age arrangements in alternative education settings can consist of students under and over the age of 18. Traditional pedagogical approaches to teaching all students may not be appropriate in a nontraditional high school that offers a high school diploma to students between the ages of 16 and 22. The requirement for determining which students require a pedagogical or andragogical approach is necessary in promoting success in the learning environment. Failure to identify the students who are self-directed, bring different life experiences to class, want to know the purpose of learning activities,

need learning to have relevance to their lives, and are driven by intrinsic motivation could result in adult students becoming disengaged and dropping out of the alternative school prior to graduation.

Literature Search Strategy

I searched several databases to obtain current literature on the topics included in the literature review. These databases and resources included GoogleScholar, ERIC, PsychLit, EdLit, EBSCOhost, JSTOR, Proquest Multisearch, and the Walden University Library. The reviews made were directly linked to the dropout problem in schools and how credit recovery process can solve the issue. The inclusion criteria entailed all articles: (a) Published only in the English language; (b) peer reviewed; (c) in full text; and (d) published between 2012 and 2016. The exclusion criteria entailed studies that were not published in English and articles that were not available in full text.

I used the following key words to search for the literature on the topics included in the literature search: *high school dropouts and graduation rates*, *alternative programs for at-risk students*, *alternative education* and *graduation rates, dropout rates*, *technology*, *distance education*, *online learning*, *blended learning*, *virtual schools*, and *credit recovery*. The literature search generated 40 journals published since 2011, and I selected 25 articles for use in this literature review that met the set criteria.

The Existence and Crisis of Dropout

The education sector in the United States has been faced with dropout challenges with most of the minority students leaving school before graduation compared to the general population. A report compiled by Stark and Noel (2015) on high school dropout and graduation rates in the United States indicated that in 2012, 2.6 million students

qualified in the status dropout rates because they had not enrolled and completed high school. In terms of gender, males aged 16 to 24 years have a higher dropout rate compared to females at 7.3% and 5.9%, respectively. On the national level, the dropout rates for primary ethnic groups are: Blacks (9.9 %), Hispanics (18.3 %), American Indian (14.6 %), and Whites (4.8 %; Blount, 2012). In comparison to the 2012 report on dropout in terms of race and ethnicity, Whites and Asians have lower rates of 4. 3% and 3. 3% respectively compared to American Indian/Alaska Natives (14.6%), Hispanic (12.7%), and Blacks (7.5%) for 16- to 24-year-old students (Stark et al., 2015). Based on these statistics, the rate of school dropout is higher among the minorities and it has generally declined over the years. The decline in dropout rates could be attributed to implementation and adoption of alternative education programs that cater for the needs of at-risk students.

In the United States, high school dropout remains a major economic and social challenge. The crisis mainly affects Hispanics and Black Americans who have low graduation rates than Whites, especially those in urban districts. A status dropout rate is a representation of 16- to 24-year-olds who have not earned a high school diploma and are no longer enrolled in high school. According to the U.S. Department of Education's National Center for Education Statistics, the high school graduation rate for students of between age 18 and 24 was 89.8% in 2009 (Joo & Kim, 2014). In addition, the estimated rate of students graduating from high school within a period of 4 years was 74.7% in 2009-2010 (Joo & Kim, 2014). The dropout crisis varies depending on rate, social-economic status, and type of school one was enrolled in. According to Boyd (2015), 42% of Hispanic students, 46% of American Indians, and 43% of African American students

do not complete high school and graduate with a diploma, in comparison to 22% of White students, and 17% of Asian students. Thus, minority groups have the lowest graduation rates because they have a high dropout level. For years, a gender gap between male students and female students has remained virtually unchanged, although minority males constantly fall below the 50% mark for graduating on time. Graduation rates of students vary in the U. S among diverse regions. There are discrepancies evident in urban and rural settings; with New Jersey, Wisconsin, North Dakota, and Vermont having low dropout rates compared to South Carolina, New Mexico, Nevada, Louisiana, and the District of Columbia. Urban schools have high dropout rates in comparison to schools in rural settings.

In addition to the factors of ethnicity and age, researchers have also explored the GPA of a student as a predictor for graduation. Traditionally, first-year GPA in college has been utilized as the intermediate measure for a student's success at college. Researchers have noted that GPA could be a significant predictor for graduation as it allows the measurement of skills essential for success, such as self-control and perseverance, as well as content knowledge. In a study conducted by Hiss and Franks (2014), the researchers examined 33 private and public universities and colleges to understand the outcomes of policies for standardized testing that were option. The findings of the study suggested that standardized testing led to a decrease in the ratio of applicants for college rather than leading to useful predictive outcomes. The findings suggested that a better success predictor was GPA, due to the fact that the cumulative GPAs from universities and college closely measured high school GPAs. Noting this, the researchers mentioned that students who had higher GPAs in high school in general also

performed better during college, even in the absence of strong testing. On the contrary, those who had lower GPAs in high school graduated at a lower rate, even in the presence of strong testing.

Other researchers have noted similar findings. For instance, Geiser and Santelices (2004) found that GPA in high school has remained the best predictor for graduation in college consistently. The researchers noted that high school GPAs provide equitable, fairer, and meaningful grounds for predicting the graduation success rate in college. Researchers have noted that the success of GPA in predicting the graduation of a student is due to the fact that is allows the measurement of both cognitive and noncognitive skills necessary for college success. In addition to capturing content knowledge, GPAs also capture noncognitive capacities such as self-control (Duckworth, Quinn, & Tsukayama, 2012).

Few researchers have explored the difference between urban and rural high school dropouts. Jordan et al. (2012) estimated the high school dropout rate in urban and rural areas, the factors that determine dropping out, and if the differences in rates of graduations have changed over time. The findings suggested that high school rates of graduation were similar in the urban- rural continuum during the early 2000s. In addition, gender, biological parents' presence, family assets, and maternal characteristics were the primary determinants of graduation across both rural and urban areas (Jordan et al., 2012). Thus, the graduation rates were influenced by family backgrounds, whereby economically disadvantaged students in both rural and urban areas had similar rates of graduation and dropping out. The gaps in graduation rates by Black males seemed to be worse off compared to 20 years earlier. In addition, urban and rural areas have similar

determinants of graduation rate and dropout, which are mainly influenced by demographic factors. The findings that Jordan et al. reported provided demographic characteristics that influence graduation of students in rural and urban high schools based on demographic factors.

There are a variety of factors behind students' decisions to drop out of school. (Blount, 2012; Hupfeld, 2007). Hupfeld found that there are certain demographic factors that can increase the likelihood of students becoming a dropout. These factors include being from a less affluent background, being part of a minority group, being from a single-parent family, being male, having learning or behavioral challenges, and having language barriers (Hupfeld, 2007). Hupfeld added that learners who perform poorly in academic subjects are more likely to disengage from school than those students who are performing satisfactorily. This could be due to difficulties with examinations, resulting in poor grades, or falling behind on the credits required for graduation, which might result in having to repeat an academic year.

The National Dropout Prevention Center (2013) identified other barriers to learning, including medical problems, pregnancy, substance abuse, a dysfunctional home-life, and low self-esteem. Kennelly and Monrad (2007) reported on the early warning signs of students who are at risk from leaving high school. These include failure in core academic subjects, being held back a grade, excessive absenteeism, and other forms of disengagement. Hupfeld (2007) and Rumberger (2011) pointed out that the decision to leave school is more likely to be the result of a culmination of these factors than for one sole reason. Marshall et al. (2014) identified school related issues, for example rules, academic practices, and teacher and student relations as key causes of failure. Social and

financial barriers to graduation include language and cultural obstacles, gender, family relationships, a poor record of achievement, coming from a low socio-economic background, and the need to earn money.

While there are alternative schools that serve students who are academically advanced, the majority of alternative school target students who have high risk factors or situations that have impacted their academic performance. The alternative education setting was designed for students who had not been successful in the traditional high school environment and is conducive to the needs of the students. The flexible schedule, small class sizes, personalized relationships, and remote access to the curriculum outside of school hours, provide multiple modalities for students to meet the requirements to successfully obtain a high school diploma. This second-chance opportunity is another layer of educational protection that was designed to prevent students from dropping out of school.

Predictors and Factors Contributing to Dropout

Adverse educational experiences by students while in school are possible sources of discontent that are cause of dropout in the educational process. Students who have struggled more academically are likely to drop out. Lockett, Cornelious, and Gray (2015) examined the factors that contributed to the dropout problem experienced in secondary schools in urban school district in Mississippi and established that the feeling of being left behind academically forced the student to drop out of school. Before the students dropped out, they disengaged themselves from school via truancy, routine absenteeism, reduced participation, and disciplinary problems. With a dropout rate of 38% in Mississippi, the nationwide rate is 30%, African Americans in the State of Mississippi

dropout more than other ethnic groups. The findings by Lockett et al. are relevant to this study because they have showed how ethnicity and feeling left academically compelled students to leave school. In addition, the findings support the hypotheses that students' demographic characteristics significantly predict student graduation rates, especially when the students are African Americans.

Failing coursework among African Americans in urban district schools hinders students from graduating with their Grade nine cohorts. Lockett et al. reported factors that contributed to high levels of dropout in urban district schools. The study established that 55% of the students dropped out because they felt that their course work grades were failing. In addition, less than 50% of the high school students graduated in Mississippi because two in every five students dropped out of traditional school before graduation. For the African American students, the issue of dropout has been a tragic cycle, which has continued to increase, and this affects the graduation rates. When a student either fails their course work or feels that they are behind academically, they exhibit dropout characteristics, including absenteeism. The findings by Lockett et al. Cornelius are relevant to this research because researchers not only carried this study out among minority students, but also in urban district in a traditional school setting.

Students drop from schools because of different reasons, including frustration with the school and academic process, low grades and poor performance, and continued misbehavior in the classroom. Bowers, Sprott, and Taff (2013) identified dropout characteristics among a nationally representative dataset of tenth graders: Involved (9.3%), jaded (38.0%), and quiet (52.7%). The quiet typology consisted of those overwhelmed, uninterested in schools, and having few discipline problems, while the

involved typology participated in school activities and even had better grades. The jaded felt isolated in the school environment. Contributing factors to school dropout were portrayed early in advance, which could permit schools and teachers to improve graduation rates. Bowers et al. provided a number of signs that can be used to determine the reasons why students drop out and never graduate. Thus, students who drop out show signs including poor grades, low test scores, and accrued credit, absenteeism, and participate less often in extracurricular activities.

African Americans and Latinos have high dropout rates compared to majority of the population attending high schools. Blount (2012) established that national dropout rates among various racial groupings varied significantly. For instance, less than one twentieth of Caucasians left schools before graduation, in comparison to one fifth of Hispanic students. At the national average, the figures for Caucasians and African-Americans dropping out of schools were at 7.3% and 17.3% respectively. On the other hand, the dropping out rate for Hispanics was 15.2%, which was slightly lower in comparison to Native Americans who quit schools (Blount, 2012). Thus, race and ethnicity are predictors of dropping out. Moreover, the dropout numbers in terms of ethnic minorities tend to be considerably higher in urban centers. Demographic characteristics linked to student's dropout include: low income, older that average High School College age, and being a member of a minority group. Blount's findings are relevant to this research because the author identified the demographic indicators for at-risk students, and how such predictors can be used to tailor a program that meets their needs.

Poor academic performance remains the strongest predictor of why students drop out of school. Regardless of a student's ability, poor test scores and poor grades reduce motivation and increase student frustration to stay in school. Bowers et al. (2013) carried out a literature review on 36 studies related to predictors of high school dropout and established 110 predictors. The results indicated that low grades, poor attendance, and behavior problems are the strongest predictors that compelled students to drop out of school prior to graduation. In addition, poor grade retention, lack of parent support, ethnicity, and peer pressure were also predictors of school dropout. Thus, grade retention in schools was highly linked to dropping out of school. For example, when the student is retained in the same grade, the likelihood of dropping out in comparison to non-retained students is high. Most of the students from African American and Hispanic backgrounds tend to drop out of schools because of demographic factors. The findings of Bowers et al. are relevant to this study because it provides warning signs that can be used to identify students at-risk and subsequently help them via alternative programs. After the students have been identified, limited funds of districts can be directed to meet specific needs of at-risk students to assist them graduate on time.

There are different factors contributing to students' decisions to drop out of school. Blount (2012) found that demographic factors, including being from a less well-to-do family, being a minority group, being a child raised by a single-parent, having academic and behavioral challenges, and language barriers increased the likelihood of dropping out. The study also established that students who performed poorly in academic subjects disengaged from school compared to those who performed satisfactorily. The disengagement was as a result of challenges with examinations, falling behind on the

credits, poor grades, and repeating in an academic year. Factors like a dysfunctional home-life, barriers to learning**,** medical problems, substance abuse, pregnancy, and low self-esteem were also responsible for increased dropout rates. Blount identified early warning signs of at-risk students, including academic failure, excessive absenteeism, being held back in a certain grade, and other kinds of disengagement.

Alternative Education for Students at Risk of Dropping Out

Many school systems and educational institutions have gone ahead to develop alternative high school programs to respond to the dropout problems and to support the students' needs. According to Smith and thomson (2014), the commonly used alternative educational programs are: Adult High School Diploma, and the Graduate Equivalency Diploma. Alternative schools are based on a paradigm shift from the traditional school setting and environment because they provide not only supportive, but also a flexible learning process. The alternative schools use a standards-based curriculum and teachers and school personnel are caring, and this enhances better academic achievement. Thus, most of alternative programs aim at at-risk students, who have issues that could prevent academic success while in a conventional school environment (Smith & Thompson, 2014). Alternative education programs are intended to provide support to students who have learning deficits, need one-on-one tutoring, are victims of bullying, and have notable behavioral challenges. Alternative schools are effective because they prevent students with economic, social, or psychological problems from dropping out of schools. Alternative schools are options that offer at risk students with a contemporary pathway to obtain high school education, reducing the high dropouts, and increasing the graduation levels.

The development of alternative schools in the U.S. education system was to minimize the number of students at risk of leaving school prematurely by using different methods that are found in conventional educational settings to have them schooled. Iachini, Buettner, Anderson-Butcher, and Reno (2013) carried out an exploratory case study on the academic disengagement and reengagement process of students registered in a dropout recovery charter school. The study established that risk factors like lack of teacher support and discipline and behavioral challenges hindered success in the traditional school setting. Subsequently, the students enrolled in a dropout recovery charter school. The purpose of creating alternative education systems was to empower challenged students and to promote success among students who had dropped out of schools. The students who had enrolled in the dropout schools reported success in grades, and this was enhanced by self-determined motivation, school structure, individualization of learning, and conducive school climate (Iachini et al., 2013). In comparison to traditional school settings, charter schools provide a different approach that motivates students at the risk of dropping out of school to continue with their education until graduation. The findings are relevant to the study because they indicate the role played by alternative schools and how to keep students in schools; therefore, alternative schools have been developed with the intent of responding to challenges and to provide solutions to student's needs.

The alarming dropout rates and low graduation rates reflect the ineffectiveness of the traditional school system in terms of its inability to educate at-risk youth. The alternative education can assist at-risk students earn high school diplomas because they are tailored to meet the needs of the students. Lagana-Riordan et al. (2011) conducted a

qualitative study and established that majority of the students who attended alternative schools were reported of having been unsuccessful in traditional school settings. In addition, the research portrayed poor grades, absenteeism, and behavior problems, as some of the causes of school dropouts. In a similar view, Smith and thomson (2014) found that low graduation rates, social and behavioral issues, and marginalization of at-risk youth were indicators of the inability by the traditional school system in meeting the educational needs of many students. Alternative schools meet the needs of dropout students because they are designed to prevent academic failure for at-risk students who make up a large proportion of the population. Lagana-Riordan et al. (2011) established that traditional schools lacked a number of characteristics necessary for the success of a diverse range of students that alternative schools provided. For instance, alternative schools provide positive peer relationships and in comparison, to traditional schools, they are safe. On the contrary, many of the students reported that traditional school environment felt uncomfortable, unsafe, and hostile; and this encouraged them to dropout; however, the manners in which alternative schools are designed and operated support the needs and safety of students. The findings by Lagana-Riordan et al. provided guidelines that can assist educators and schools to use alternative schools to better support at-risk students.

Public alternative schools and programs offered to at-risk students play an integral part in educating such students to accomplish their academic goals. Izuma, Shen, and Xia (2013) used archival data from the Schools and Staffing Survey to examine the determinants of graduation rates of public alternative schools and established that summer programs and Hispanic teacher ratio were linked to graduation rate, while

traditional grade structure negatively affected the rate of graduation. The findings by Izuma et al. suggested that alternative schools have high expectations in terms of providing educational programs for at-risk students. Thus, alternative schools are recommended for minority students at-risk of dropping out because they provide an environment to graduate. The findings by Izuma et al. are significant to the current study because they related to how students' demographics and staffing characteristics influenced the attendance of students placed at-schools in public alternative schools. When minority students were part of public alternative schools and programs, the graduation increased rate. Thus, students placed at-risk, identified in terms of racial and ethnic minority groups, economically disadvantaged populations, immigrants, and language minorities have higher dropout rates in secondary schools, compared to alternative schools (Izuma et al., 2013).

Alternative education programs are effective in helping decrease the dropout rate and reverse the failure rate of students. Genao (2014) conducted a quantitative research study to establish the effectiveness of collaborative alternative education in Newark, New Jersey. The study established that alternative education programs were more effective in terms of reducing high dropout rates, compared to existing programs in the district. For instance, alternative education programs not only reduced the dropout rate, but also curtailed the onset of student disengagement and reversed the student failure rate. The rationale for the changes was to ensure that alternative education was tailored to meet the needs of the students that were discipline and academic related (Genao, 2014). Alternative education programs have been effective in Newark because they meet the emotional, social, and academic needs of students at risk. Such students could not adapt

to the conventional high school setting where they had been suspended, had retaken courses, were linked to repeated behavioral referrals, were victims of substance abuse, and had exhibited chronic absence. When the needs of the students are met in alternative education programs, they are more likely to complete education. Thus, alternative education provides a standard educational plan that caters for at-risk students.

Students underperform because traditional paradigms used in schools do not meet the needs of at-risk students. Cullen, Levitt, Robertson, and Sadoff (2013) established that the alternative model of education helped at-risk students because they were associated with increased instructional time, data-driven instructional practices, tutoring. They also showed the model fostered a culture of high behavioral and academic expectations (Cullen et al., 2013). Thus, alternative education provides at-risk students with innovative programs that meet the dropout student needs. The programs are designed to target a specific population; therefore, they decrease the dropout rate by providing varied modalities for at-risk students. The systematic review is significant to this study because it linked alternative schools with improved graduation rates. It does not, however, show how alternative schools meet the socioeconomic, academic, and emotional needs of the students. The study supported findings by Smith and thomson (2014) that alternative education provides educational services that cater for the needs of at-risk students, which cannot be met in a conventional school setting.

Alternative schools act as educational options to unsuccessful students in traditional school settings. For instance, alternative schools and programs cater for at-risk students, including those in juvenile detention, students with disabilities, and students faced with significant behavior challenges. Other reasons why students transfer from

traditional schools to alternative schools include chronic academic failure (57%); disruptive verbal behavior (57%); physical aggression (61% of districts); possession of firearms (42%); and disruptive verbal behavior (Simonsen & Sugai, 2013). Positive Behavior Interventions and Supports (PBIS) is a means used in alternative education to ensure that at-risk students from traditional schools benefit from the tiered support under the framework. At-risk students, especially those with behavioral and academic deficits, have their problems solved under alternative education, which increases their rate of graduation. Alternative schools help students at-risk and those who had been unsuccessful in traditional school systems. The findings by Simonsen by Sugai are relevant to this study because they indicated that alternation education should focus mainly on challenges faced by students, rather than on their personal attributes.

While there are alternative schools that serve students who are academically advanced, the majority of alternative schools, target students who have high risk factors or situations that have impacted their academic performance. The alternative education setting was designed for students who had not been successful in the traditional high school environment and is conducive to the needs of the students. Marshall et al. (2014) conducted a study on alternative education programs in Honduras and established that such programs were designed to ensure the needs of at-risk populations were met. The study of 5,500 students established that although the alternative programs were reaching the vulnerable population, the rate of dropout was high between Grades 7 and 9, at more than 50% (Marshall et al., 2014). In comparison to the control schools' samples comprised of formal lower secondary schools, the dropout rate was 25% between Grades 7 and 9. Based on these findings, it is certain that dropout rates in control groups and

alternative programs are not much different; however, alternative programs improve students' outcomes, hence meeting the demand for schooling. The findings are relevant to this project because it provides a comparison between traditional and alternative schools.

Credit Recovery

For many students in high school, accruing credits on time is a significant problem (Gurung & Rutledge, 2014). For students who struggle academically, the difference between dropping out and finishing school may end up being a question of academic opportunities for obtaining the needed credits (Gurung & Rutledge, 2014). According to New York City Department of Education, struggle with credits is one of the major factors common among students who drop out, as it was found that out of all the dropouts in the city, 93% were lacking in the required credits for completing graduation and were not in the grade they were supposed to at their age. These findings suggested that a struggle with earning required credits is one of the major factors for students dropping out. In the context of these numbers, it is also important to note that the creation of additional opportunities created especially for students with lower credits, such as alternative schools and programs for credit recovery, resulted in the New York City's rate of graduation for these students to almost triple (American Youth Policy Forum, 2014).

Based on evaluation studies and research on online education, findings suggest that the students in these programs perform either better than or equal to the students who study at traditional setting (Gurung & Rutledge, 2014). Online courses that are designed better result in students performing better than courses in the classroom that are of high quality (Heppen, 2015).

Online courses. Online courses differ in terms of both their duration and length. Online courses of full length provide a higher-level education following the three factors of evaluation, synthesis, and analysis (Lewis, Whiteside, & Dikkers, 2014). On the contrary, online courses that are of shorter length focus on lower level factors such as application, comprehension, and knowledge (Lewis et al., 2014). Although many people perceive online educational courses as easier, those students who take these courses see them as more thorough than the courses that are taught face-to-face in traditional setting (Pettyjohn & LaFrance, 2014). Other than the fact that in online courses the students themselves take learning responsibility, the learning advisor also plays a greater part in online education (John, Chengfu, & Yaacov, 2015).

The goal of online learning programs is to provide an alternative to the need of diverse students as well as to increase the opportunities provided to students for higher quality education (Xu & Jaggars, 2013). According to the National Center for Education Statistics (2015), online courses were initially created to provide courses that were not easily available everywhere. Through gradual evolution, online courses are now available to all districts to meet the different needs of the students individually. Many more districts are not seeking to provide alternatives to learning that are personalized according to the individual needs of the students (Freeman & Simonsen, 2014). Researchers have shown that educators believe online courses prove effective when the goal is to assist students who are most likely to drop out, who have not succeeded in one or more different courses, and those who have a need for alternative educational system (Eno & Heppen, 2014). Assisting students who drop out due to bad academic performance was the primary aim of this study.

After the arrival of the World Wide Web, distance education, which initially started in the nineteenth century as correspondence courses and in the twentieth century utilized television, became almost entirely web-based (Volkerding, 2012). Recently online courses have become a major choice for many students, and an increasing number of school districts are applying alternative educational methods to fight against high dropout rates among high school students, mostly due to the possibilities allowed by these courses for personalization corresponding to the diverse needs of the students (Pettyjohn & LaFrance, 2014).

It is also important to note that a review of existing literature suggested many researchers point out that in spite of the wider usage of online courses as well as the opportunities for personalization it provide, online courses have still not received universal acceptance (Palardy, 2013; Wolff, 2014). Many people have a different standard for higher education, which is often more demanding than the traditional education system (Palardy, 2013). Some researchers have further suggested this as a positive sign, noting that higher scrutiny of online education may result in better quality for online education when compared to the quality of traditional education system (Freeman & Simonsen, 2014). Others have objected to this point, noting that the students who utilize online education to gain better credits are the same students who left traditional education, and higher scrutiny for online education may further discourage them from attempting (Eno & Heppen, 2014). These scholars have argued that there should be equal expectations of quality from both traditional and online education. These expectations include attention paid to individual students in the form of different types of interaction during the course. As in the traditional education system where there is a face-

to-face interaction between teachers and students, it is important that educators in online education also know their students through their online presence, writing style, and work quality (Spitler, Repetto, & Cavanaugh, 2013). An evaluation of online education for credit recovery was the goal of this study, the findings of which might provide indication about the effectiveness of online credit recovery programs as well as recommendations on what parts may require additional work to be effective.

There are many features with online education made possible through technology that makes it an effective alternative. For instance, in spite of the face-to-face interaction between teachers and students lacking in online courses, it is possible for teachers to gain insights about the progress of the students as well as their time and effort into the courses (Cardak & Vecci, 2015). Teachers are able to use technology to check how many times a student had logged in during their course as well as the amount of time they spent when they did and the work they accomplished in the session (Cardak & Vecci, 2015).

Although these benefits make online courses more attractive, the use of online courses to assist students who are at risk or need assistance with credit recovery has given rise to a number of specific problems (Volkerding, 2012). The positive part of online education, when compared to traditional education, is that it allows the students to move at their own pace and take their time in understanding a concept (Allensworth, Michelman, Nomi, & Heppen, 2014). Online courses also allow students to move through a certain part of their course faster if they already have a better grip of the subject (John et al., 2015). This feature is also a cause of concern for the educator. During online courses, it is the responsibility of the student to be self-motivated, a factor that is of higher significance in online education than in traditional education setting, as students

regularly meet their teachers face-to-face in the latter (John et al., 2015). On the contrary, students in online courses, in comparison, have to take responsibility to learn their material on their own. Students who did not succeed in traditional settings have already satisfied the requirement of seat time; as such, during the credit recovery program, they have to focus only on satisfying the standards for the course competency (Cardak & Vecci, 2015).

Credit Recovery Programs

The goal of a credit recovery program is to allow the student to remain in school and complete their graduation on time (Allensworth et al., 2014). It is therefore important to examine if this system is effective, since it can help the many students who drop out of high school due to lack of required credits as well as being over-aged for their grade (Heppen, 2015). By examining the historical data, I aimed to determine whether the credit recovery program is effective as a solution for high school dropout.

Many online programs in recent years have begun to provide credit recovery programs that are specially tailored for the need of the dropout student as well as the at-risk student (Eno & Heppen, 2014). Credit recovery programs are provided in the place of traditional classrooms when the school hours are over, during school hours, on weekends, through teacher-student correspondence, in summer schools, or in the evenings (John et al., 2015). These programs are aimed at assisting students struggling with gaining the required credits so that they do not dropout. Although the credit recovery programs differ from one state to another, they all have a number of factors in common. All credit recovery programs are either provided as supplemental programs for students who are at-risk, as alternative forms of education for students who are not able to

attain success in the traditional classrooms, or as efforts across the school at restructuring provided to all students (Volkerding, 2012).

Many online programs offer credit recovery programs, and their specific goals differ from one program to the next. According to the existing research, they often consist of a number of goals, such as assisting students to catch up with their credits in order to satisfy the requirements for successful graduation, assisting students for state exam preparation, assisting students to meet deadlines for gradation, bring students who have dropped out of school back into the school program, and assist with specific concerns related to finance so that a diverse range of students are able to attain graduation (Allensworth et al., 2014; Eno & Heppen, 2014; Heppen, 2015; Volkerding, 2012). Despite the obvious benefits of credit recovery programs, there are still questions related to their effectiveness. One of the initial challenges for many school districts was to overcome these questions related to online course and credit recovery programs (Pettyjohn & LaFrance, 2014). Such concerns included teachers expressing issues related to online coursework in terms of their quality as well as quantity. Many teachers were also afraid that the wider adoption of online courses would result in computers replacing human teachers (Wolff, 2014). On the contrary, many teachers have realized not only that online courses provided a better alternative for credit recovery among students at the risk of dropping out, but have also adopted features from online courses to create a hybrid educational experience for students in traditional classroom (Volkerding, 2012). The primary question that still remains in many districts is related to the effectiveness of online credit recovery programs in assisting students to gain required credits for

graduation and in reducing the number of students who dropout due to academic reasons, an examination of which is the goal of this study.

Implementing credit recovery programs. Although researchers have suggested strategies for the implementation of credit recovery programs, many questions regarding credit recovery still remain. As Johnson (2013) noted in a review of literature, there are variations regarding the credit recovery program structures, and a lack of clarity about the factors that work and those that do not work. Such research has led to recommendations regarding the successful implementation of credit recovery programs.

Recommendations from Johnson (2013) for the successful implementation of credit recovery programs included offering credit recovery across the whole state instead of merely the districts where the program is run, alignment between state standards and credit recovery programs for a unified set of standards to target for students, and the use of evidence-based research to include the most useful factors proven successful in the implementation of the best credit recovery programs (Johnson, 2013). Fetsco, Donnelly, and Tang (2016) conducted a review of the literature on credit recovery programs and stated that implementation of credit recovery programs is more likely to succeed when initiated early, with recommendations for courses as early as the ninth grade. Additionally, students who do not succeed in these courses are recommended to be educated regarding the significance of credit recovery, which may result in their timely graduation (Fetsco et al., 2016). Fetsco et al. further recommended that the structure of credit recovery programs should allow students to benefit through content learning rather than merely through recovering credit. Additionally, the motivational needs of the students should be noted in credit recovery program planning, as implementation is more

likely to succeed when the content is related to the student's career interest (Fetsco et al., 2016).

During the planning stage and the implementation process of credit recovery programs, it is important to engage curriculum specialists and master teachers to enhance rigor (Fetsco et al., 2016). Assistance from counselors and social interventions for personal and social issues that students might have as well as the presence of on-site teachers are other factors associated with establishing a harmonious relationship with students and increasing their motivation. Planning for evaluation and research as part of the credit recovery program is another important factor for successful implementation (Fetsco et al., 2016).

An important part of online credit recovery programs, as noted by Clements et al. (2015), is the lack of high rates of completion, which pose a challenge to states in examining whether the investments made for these programs result in the outcomes desired. An important part of implementing credit recovery programs, therefore, is for states to analyze whether the students completing online credit recovery courses go on to other necessary courses (Clements et al., 2015).

As part of the implementation of Illinois' College and Career Readiness Pilot Act, the Illinois pilot programming provided funds to allow academic interventions in mathematics and English to enable students deemed below the level required for college to receive adequate preparation to enter college (Bragg & Taylor, 2014). Analyzing the implementation of this program at River College and Prairie College, Bragg and Taylor noted that the use commercially available software for the delivery of college and career readiness intervention at River College led to the intervention becoming self-paced. The

researchers noted that changing the traditional concept of education delivery may lead to students receiving modules that are more efficient by being personalized according to the needs of the students. Additionally, this change also enabled the development of an environment that was more casual in relation to a high school environment, resulting in students gaining the ability to exercise more self-responsibility.

The lessons on implementation of credit recovery programs were also discussed by Gajewski and Mather (2015) on the basis of a credit recovery program implemented at Ontario's Centennial College. This program highlighted the students' learning needs for the implementation strategy, placing the significance of faculty at its core. The implementation of the program was based on the understanding that faculty are at the core of students' success, as they provide support, encouragement, and advice in addition to setting relevant expectations. Gajewski and Mather found that this focus resulted in the faculty offering a supportive and caring environment through the accommodation of the students' needs, as well as being flexible and adoptable. The development of an adequate environment allows the students to feel encouraged and motivated to persist and succeed. Other implementation strategies that these authors discussed included the emphasis on subject area courses, flexibility with evaluations, and small class sizes. The latter was found to facilitate collaborative pedagogies oriented towards community, increasing motivation and engagement, especially for at-risk students.

Another successful lesson on implementation came from Rio Grande Valley's Pharr-San Juan-Alamo Independent School District (Intercultural Development Research Association [IDRA], 2014). Before the implementation of a credit recovery program, the statistics suggested that the dropout rate between grade 9 and grade 12 was of 500

students. The implemented program invited students to resume their school and achieve diploma by developing a path towards college through dual credit recovery and credit classes. The implementation of the program resulted in a shift in the school district towards a focus on teaching practices directed at college readiness (IDRA, 2014). As part of the implementation of the credit recovery program, the default curriculum in the district was transformed to focus on college readiness. As a result of the program, the district's dropout rate began to decrease. The program, in essence, allowed the experience of college to the students at high school, transforming the school district into an early college district (IDRA, 2014). Finally, an important advantage in the success of Portland Community College's implementation of credit recovery program was the development of powerful bonds between program staff members and students. The program led to the development of a culture centered around supporting students as they overcame challenges (Willard, Bayes, & Martinez, 2015).

Challenges implementing credit recovery programs. In addition to the lack of clarity regarding the implementation process for credit recovery programs, there are challenges that may negatively affect the implementation process of credit recovery programs. Researchers studying credit recovery program have provided specific information on such challenges in the existing literature. Two of the most frequently mentioned challenges for the successful implementation of credit recovery programs include poor training, poor course quality, and lack of accountability.

Research conducted in the context of Iowa and Wisconsin public high schools that utilize credit recovery programs by Clements et al. (2015) yielded a number of insights regarding the challenges in implementing credit recovery programs. The researchers

found that in Iowa, the most significant challenge was with respect to a severe lack of adequate training and poor online course quality. Wisconsin had similar challenge with respect to lack of adequate quality for courses; additionally, the latter also had problems with lack of adequate funding. Clements et al. discovered that despite the challenges, both the states had allocation of responsibility to staff members for monitoring student progress, providing technical support for non-academic problems, and assisting the students who were legging in academic progress.

Implementation challenges for credit recovery programs were also discovered by Lewis et al. (2014), who conducted a case study over a period of 3 years in North Carolina Virtual Public School and North Carolina Performance Learning Centers. Their insights suggested that the perception of students on the benefits and challenges of online learning were similar. The benefit for online learning included its self-paced nature, while the challenges included the management of responsibility and time.

The solution for these challenges, as Lewis et al. (2014) suggested, was to provide support structures, especially directed towards at-risk students. The findings suggested that online effective online learning environments required adequate orientation and familiarity to succeed, which may create problem when students do not receive adequate support. Students who participated in the study of Lewis et al. pointed out this challenge during the beginning of the online learning journey. The majority of students noted that they had to deal with these challenges themselves, leading to the insight that provision of support could allow students to focus on the course content rather than solving technical problems, resulting in less time consuming and beneficial program implementation (Lewis et al., 2014).

The successful implementation of online credit recovery programs requires teachers to have not only teach the content of their subject, but also assist students in the processes for engaging and interacting with the online learning environment (Zweig & Stafford, 2016); however, there are only four states and the District of Columbia that have mandatory online instruction for teachers as requirement before teaching online courses in K-12 (Zweig & Stafford, 2016). Such a framework may exacerbate the challenges in the implementation process for online credit recovery programs. Additionally, teachers experience challenges with maintaining the engagement and perseverance of students. As most teachers receive their online training while they teach students in online courses, professional development is an essential aspect for online credit recovery programs (Zweig & Stafford, 2016).

Another challenge to successful implementation of credit recovery programs is with respect to accountability. A comparative analysis of policies conducted by Hemmer and Shepperson (2014) across the states of California, Texas, Kentucky, and Michigan to understand the requirements for accountability in alternative programs in education yielded important insights regarding variations in assessment for alternative programs. Although the researchers found a system for accountability in alternative schools in California and Texas, there was no procedure for differential assessment for alternative schools in Kentucky (Hemmer & Shepperson, 2014). Similarly, no separate assessment procedures were found in Michigan. Although these states are under the process of redesigning their accountability systems, there is no clarity whether alternative procedures for accountability result in the achievement improvement of at-risk students. Lack of consistency on standards for accountability across traditional and alternative

schools result in lack of clarity regarding knowledge about the extent to which education standards are being met at alternative schools (Hemmer & Shepperson, 2014).

GPA calculation in credit recovery programs. In addition to ethnicity and age, researchers have also explored the GPA of a student as a predictor for graduation. Traditionally, first-year GPA in college has been utilized as an intermediate measure for a student's success at college. Researchers have noted that GPA could be a significant predictor for graduation as it allows the measurement of skills essential for success, such as self-control and perseverance, as well as content knowledge. In a study conducted by Hiss and Franks (2014), the researchers examined 33 private and public universities and colleges to understand the outcomes of policies for standardized testing that were optional. The findings of the study suggested that standardized testing led to a decrease in the ratio of applicants for college rather than leading to useful predictive outcomes. The findings suggested that a better success predictor was GPA, due to the fact that the cumulative GPAs from universities and college closely measured high school GPAs. Noting this, the researchers mentioned that students who had higher GPAs in high school in general also performed better during college, even in the absence of strong testing. On the contrary, those who had lower GPAs in high school graduated at a lower rate, even with strong testing.

Other researchers have noted similar findings. For instance, Geiser and Santelices (2004) found that GPA in high school has remained the best predictor for graduation in college consistently. The researchers noted that high school GPAs provide equitable, fairer, and meaningful grounds for predicting the graduation success rate in college. Researchers have noted that the accuracy of GPA in predicting the graduation of a

student is due to the fact that is allows the measurement of both cognitive and noncognitive skills necessary for college success. In addition to capturing content knowledge, GPAs also capture noncognitive capacities such as self-control (Duckworth et al., 2012).

Some researchers, however, have noted the problem in utilizing student GPA as the student achievement measure due to the fact that different students enroll in different courses and the adopted scale used to evaluate grades is not an interval, but rather ordinal, scale. Hansen, Sadler, and Sonnert (2017) found that there is a lack of optimal method to calculate a single composite on the basis of ordinal measures. Additionally, variations in weighting policies between schools and states, without justifications based in research, also pose problems for using GPA as the student achievement measure.

For instance, in the District of Columbia Public Schools (DCPS), GPA for high school students is calculated 3 days following the date on which marks are submitted; however, according to DCPS (2015), students' cumulative GPA consists of marks that are received from failed courses that are retaken to recover credit between Kindergarten and 12th grade. Additionally, marks received through extended programs for education have the same credit and values for GPA as standard courses. The courses in progress, the courses that have not been given final marks yet, and the courses that are scheduled-in are all shown in high school transcripts in DCPS, and the GPA calculation includes all the marks that appear in the transcripts (DCPS, 2015).

In Fort Worth Independent School District (FWSD), students are allowed to recover their credits in a district-approved, Web-based credit recovery program or a class in the school year or during summer school (FWSD, 2016). Although the transcripts

include the grade student earn via credit recovery in District approved, Web-based credit recovery program or a class in the school year, together with the failing grade, only the failing grade—not the grade that students earn—is considered during GPA calculation (FWSD, 2016). When the earned credit is 70 or above in grade, it is included in the GPA calculation (FWSD, 2016).

The transcripts for the credit recovery course in North Carolina is recorded as *P* for pass and *F* for fail (North Carolina Public Schools [NCPS], 2014). This record has no influence on GPA calculation; instead, a successful course earned through credit recovery is reflected as credit for the course that is relevant for graduation purposes (NCPS, 2014). As the transcript keeps a record of both a failed course as well as the grade associated with it, the student is required to repeat the whole course in order to improve his or her GPA (NCPS, 2014), and credit recovery is only useful to earn necessary credit for the purpose of graduation.

In some California school districts, such as Oakland, San Francisco, Los Angeles, and San Diego, GPA is considered less significant for the purpose of college enrollment. The policies for graduation adopted by these districts mandate every student to finish required course prior to receiving diploma for high school in alignment with the California State University system requiring the completion of the requisite courses with at least a C grade for each course prior to enrollment (Betts, Zau, & Bachofer, 2013). Betts et al. conducted a study of student transcripts for the 2011 class at the San Diego Unified School District. The findings suggested that 12% of the students were admitted for 4-year college despite not completing the required course work. Some of these students were admitted on the basis of coursework that was not present in the transcripts

for the district; however, the completion of a-g courses is positively associated with GPA (Betts et al., 2013).

Researchers have suggested a positive impact of credit recovery programs on GPA. Sharp (2013) conducted a study of Hamblen County's (Tennessee) Credit Recovery Program and found that those students who were part of this credit recovery program showed improvements in language, math, and reading. Subedi, Reese, and Powell (2015) also found that credit recovery programs are significant predictors of GPA, and have more influence than goal setting and motivational support. Saupe and Eimers (2013) conducted a study on the reliability of GPA estimated for unweighted and weighted one semester, 1 year, 2 year, and 4-year GPAs, finding that the cumulative reliability of GPA decreased with the increase in semesters.

Successful credit recovery use at alternative schools. Various alternative schools have reported success in implementing credit recovery programs. In this subsection, four alternative schools will be discussed. These include Pasadena's Blair IB Magnet School, upper Midwest alternative African American school, and positive behavior interventions and supports framework at two alternative schools.

The Blair IB Magnet School, located in Pasadena, California, reported the successful implementation of Leading Educational Achievement-Revitalizing Neighborhoods (BlairLEARNs), an after-school credit recovery program that reaches 717 students annually (Perrenoud, 2010). The students come from diverse ethnic contexts, and work in an environment of mutual commitment to tolerance, learning, cooperation, and self-discipline. The publicly fund project, support by the state of California, provides classes for credit recovery to at-risk students of grades 7-8 and grades 9-12 for both

retention and graduation. The program offered both an expanded day for homework, tutoring, sports, and enrichment classes, as well as academic assistance (Perrenoud, 2010).

The goal of BlairLEARNs was to ensure that after school activities are linked to instructional day activities (Perrenoud, 2010). The program is implemented by credentialed teachers at no charge to students, and counselors with collaboration from the principal examine transcripts to determine requirements for credit recovery classes so that graduation rates are not compromised. In essence, those students who needed credit recovery are identified through the transcript analysis. Significantly, there had been a 28 percent increase in high school graduations that can be attributed to credit recovery classes (Perrenoud, 2010).

Blair IB Magnet School, an upper Midwest alternative school for African American students, has also reported success with credit recovery with a strategy centered around meeting the emotional and social learning needs of the students enrolled in online credit recovery courses (Slaten, Irby, Tate, & Rivera, 2015). The program facilitated the acquisition of the students' high school credit through via school and home with the aim of allowing a transition to traditional school again. Non-traditional means are used by teachers, including a focus on nurturing the social, emotional, and cultural needs of the students, resulted in success with such transitions (Slaten et al., 2015).

As Slaten et al. (2015) reported, this program facilitates students working for half of the day from school and the rest from home. Of the students who were part of the program, majority had experienced truancy-related issues, social or academic discomfort, expulsion, and adjudication, in addition, 80% of students were eligible for free or reduced

cost lunch and many of the students had completely stopped attending traditional schools previously (Slaten et al., 2015).

An analysis of the implementation of the program conducted by Slaten et al. (2015) found that pedagogy, relationships, a focus on community, and the school environment formed the modalities that were used by community members and school professionals to socially, emotionally, and academically engage students. The program's success highlighted the importance of creating community collaboration, building relationships, and developing social-emotional learning that is culturally relevant to increase the comfort of the students and meet their needs (Slaten et al., 2015).

The PBIS model has also been implemented across schools in the United States. Swain-Bradway, Swoszowski, Boden, and Sprague (2013) noted that schools that invested continuous effort to implement the model have reported various benefits including high engagement of students with academics and decrease in problematic behavior. Although limited, the research conducted on alternative school supports the implementation of PBIS in alternative schools. For instance, in their study of two alternative schools, Swain-Bradway et al. found that participants felt the PBIS resulted in the facilitation of pro-social behavior in their students. The researchers found a link between the development of prosocial behavior with academic success, noting the responses that stated the importance of prosocial behavior, as opposed to punishment, in increase maintenance of skills. The researchers concluded the study by noting the need for additional research in the context of credit recovery to determine the success.

Program implication for credit recovery programs. The current study may have significant implications for credit recovery programs. Improving the high school

graduation rate has become a major focus for policymakers (Picciano, Seaman, Shea, & Swan, 2012). Picciano et al. found that there are online learning initiatives that address school reform issues such as improving graduation rates, credit recovery, differentiating instruction, and virtual connections to future college careers. In reaction to the nation's dropout dilemma, the Dropout Prevention Act of 1991 was established to provide grants for school dropout prevention and reentry programs (USDOE, 2002). No Child Left Behind legislation provided incentives to schools and districts for the implementation of e-learning programs for credit recovery (USDOE, 2001). Credit recovery allowed students to retake failed courses; it also provided under-credited students the opportunity to graduate with their cohort graduating class (Brown, 2012; Duffey & Fox, 2012; Franco & Patel, 2009). Hughes, Zhou, and Petscher (2015) asserted that credit recovery was a prevalent reason for high school students' participation in online courses. Moreover, students needing credit recovery represent a major portion of the high school student population that subsequently dropped out or were late graduating (Picciano et al., 2012). Queen et al. (2011) found that over 62 % of U.S. school districts participate in distance credit recovery programs (Queen et al., 2011).

When secondary schools become dependent upon online learning to address their educational needs, the issue of quality remains a concern among education stakeholders (Picciano et al., 2011). Oliver and Kellogg (2015) reasoned that the characteristics for students to succeed in an online environment may not be well-matched to the at-risk population. Picciano et al. (2011) advocated that a significant portion of the students who need to recover credits are those students who may not have the self-directedness, or academic competency to succeed in the courses. Online coursework may lead to

increased self-efficacy in at-risk students only if adequate supports are in place to help them to succeed (Lewis et al., 2014).

School reform mandates to improve the high school graduation rates have become the impetus for school systems to employ credit recovery as a convenient method to accelerate their graduation statistics (Picciano et al., 2012). Notably, increased accountability metrics for school performance based on high school graduation rates may present serious concerns for some online vendors (Carr, 2014).

The lack of empirical data on credit recovery programs was insufficient to hypothesize a relationship between the expansion of online courses and increased graduation rates (Carr, 2014). McCabe and St. Andrie (2012) identified two factors that explain the difficulty of determining the number of students participating in credit recovery programs. These two factors are that the number of students enrolled in credit recovery is difficult to determine because of minimal government regulation (McCabe & St. Andrie, 2012), as well as that some states do not track the students that are enrolled in online courses (Clements et al., 2015). For example, Iowa and Wisconsin are among the states that do not have the resources to track their credit recovery course offerings (Clements et al., 2015).

The first evaluation of credit recovery occurred in 2011, in which the federal government awarded a research grant to analyze the impact of credit recovery (McCabe & St. Andrie, 2012). Heppen et al. (2012) explained the results of the second of a 4-year research study of two cohorts who failed second semester algebra. Results thus far appear to be mixed, and where significant differences were observed, they favored the face-to-face (f2f) condition. The U.S. Department of Education (2015) found that the design

protocols of nine credit recovery programs did not meet the What Works Clearinghouse (WWC) design standards that are required to evaluate the effectiveness or ineffectiveness of the credit recovery interventions. Carr (2014) clarified that the advantages, disadvantages, benefits, apprehensions, and funding associated with online learning were indicators for further research in improving the U.S. school system. Similarly, Sparks (2013) explained that state and local policies need to be developed and maintained in the areas of funding, attendance requirements, and other relevant issues associated with online education. Further, an evaluation process needs to be established for new online credit recovery programs (Sparks, 2013).

Credit recovery represents the outgrowth of the federal government's mandate to improve high school graduation rates. Credit recovery offers students an opportunity to either graduate with their cohort graduating class or to eventually graduate by retaking previously failed courses. The uniqueness of credit recovery is that the students retake an abbreviated version of the failed course, and these courses usually are offered during the school day rather than in the evening hours or during summer school. The curriculum delivery method can consist of various methods, and the course duration may vary from district to district; however, the goal of credit recover is to decrease the high school dropout rate. The effectiveness of credit recovery programs is yet to be determined. The major criticisms of the credit recovery program range from lack of students' academic and technological preparedness to the limited empirical research associated with credit recovery programs and graduation rates. While credit recovery may not be the solution for improving graduation rates, there are promising and emerging practices that have implications for further research.

Implications

The implications for the current research project are identifying and providing interventions for academic and technological readiness for students with certain demographics, as well as providing professional development tacking and documenting the school transcript for students participating in credit recovery programs. In addition, the results of the current study may provide educators with practical interventions for credit recovery students in an alternative charter school and it relates to age, gender, and socioeconomic status. Based on my findings, which I will present in the next section, the actual project developed for this study was a professional development plan for teachers and support staff.

Summary

The review of literature suggests that there is ample evidence to support the benefits of online education in general and online credit recovery programs in particular. The primary question in many districts, however, is about the effectiveness of online credit recovery programs in assisting students to gain required credits for graduation and in reducing the number of students who dropout due to academic reasons. There is a lack of research in which the question of student dropout is approached through the lens of historical data using online credit recovery programs in the selected district. Such data may not only provide greater insights into how online credit recovery programs assist or do not assist at-risk students to gain required credits for graduation but may also assist with possible recommendations on the basis of the data showing the factors that are effective in improving the rate of student dropout in the district through credit recovery programs. Such recommendations may be useful not only for educational policymakers

and educators working in both traditional and online educational systems, but also for researchers concerned with high school dropout.

The current analysis of existing literature on high school dropout suggested a tendency towards asking not how the students who are at the risk of dropping out are affected by alternative education, but on the different factors that influence a student to drop out of high school. While the latter is important to ensure an evaluation of significant factors to provide a solution, it is also important to consider, on the basis of the existing resear that suggests an important role of traditional school system incompatibility of a student or their diverse needs not being met in the traditional school system that leads them to drop out of school, the effectiveness of alternative educational programs such as online credit recovery programs which have not been explored in detail. Such an examination can be made more accurately on the basis of existing historical data in a selected region, as these data may reveal important patterns.

Researchers have also suggested more research related to high school dropout among at-risk students. Some researchers have also highlighted the need to conduct more research that is based on evidence, rather than perceptions, as well as the need for focusing on programs that are aimed at reducing the dropout rate. In this study, my aim was not to assist with the problem of high dropout, but instead to examine the effectiveness of credit recovery program through investigation of historical data. Additionally, I placed the focus on at-risk students as well as online credit recovery programs in order to fill the aforementioned gap in research. The possible implications of the findings of the study are mostly for policymakers attempting to reduce the high school dropout rate through alternative education. The findings may provide

recommendations and suggestions for professional development training as well as evidence to these policymakers and educators working in both traditional and online education on the factors that are effective with a student's decision to drop out in the context of online credit recovery programs. In addition to policymakers and educators, the results of this study may also point to areas that are effective and those that need further work for future researchers working on online credit recovery programs as well as programs aimed at reducing dropout rates among high school students.

The topics covered in the literature review were self-determined theory, adult learning, the existence and crisis of dropout, predictors and factors contributing to dropout, alternative education to meet at-risk students, and credit recovery. These topics provided the basis for my review of the extent literature on the previous research from scholars who were proponents, critics, or neutral on the proposed study of credit recovery.

Self-determination theory provides the theoretical framework for understanding the importance of motivation. At-risk students must possess both self-motivation and self-determination to be successful. Students who experience a sense of competency, autonomy, and relatedness or connectedness in the learning environment are more likely to graduate from school as opposed to dropping out.

Alternative education provides an educational setting that is conducive to students who have been unsuccessful in the traditional school environment. Students with certain risk factors are often older than conventional high school students and graduates, are academically deficient, and have insufficient credits to graduate with their cohort class. Alternative schools often have flexible schedules, some variation of online credit

recovery programs, small class sizes, and positive student teacher relationships. This setting offers at-risk youth a second chance to earn a high school diploma.

The alarming dropout rate in the United States has been the central focus of school reform; however, the dropout rate for minority youth raises serious concerns. The skill demands of the 21st century will require that students earn a high school diploma to increase their opportunity for higher education or vocational training. These postsecondary options will increase the likelihood that these individuals will be able to earn a livable wage and not be dependent on social services and living in poverty. Higher graduation rates are good for the graduates and the economy as more qualified individuals are filling more jobs in the business sectors.

The advent of technology at the K-12 level and the e-Learning mandate of No Child Left Behind (NCLB) galvanized the ability for learning to occur anyplace, anytime, and anywhere. Technology revolutionized the utilization of online learning in the elementary and secondary education settings. This ability provided students the opportunity to extend their learning and accelerate their learning opportunities.

Credit recovery provided students the opportunity to retake previously failed courses. The students retake the courses using computer courseware. The venues for retaking these courses could be alternative education schools that offered credit recovery through blended courses or state-sponsored virtual schools. The theoretical benefit of credit recovery, which is to allow students to stay on track and to graduate with their graduating class, created caution from some educators about the quality of credit recovery education. Critics have claimed that at-risk students do not have the self-discipline, academic skills, or the motivation skills to be successful with online credit

recovery courses. Conversely, supporters have emphasized that if at-risk students are supported academically, online learning could lead to improved self-efficacy, which would increase the likelihood of students' success. The uncertainty about credit recovery stems from minimal researched to evaluate the effectiveness of credit recovery programs. By examining the effectiveness of credit recovery program through examination of historical data, I attempted to assist with the problem of high, U.S. high-school attrition.

Section 2: The Methodology

Research Design and Approach

In this section, I will present the methods that I used to collect and analyze the data needed to describe the sample and test the research questions and associated hypotheses. The topics included in this section are research design, setting and sample, instrumentation and materials, data collection and analysis, assumptions, limitations, scope and delimitations, and protection of participants' rights. In addition to summarizing the samples' demographic characteristics, I will present results of the test of required assumptions for multiple linear regression as well as the results from the multiple linear regression analysis. After doing so, I will discuss my role in the research. The section concludes with a restatement of key points.

The purpose of this study was to examine the target schools' historical data to determine the relationship of credit recovery on GPA, which served as a proxy for graduation eligibility, while controlling for demographic variables. My focus was on assessing the relationship between a continuous, dependent variable (GPA) and a categorical, independent variable (participation in a credit recovery program), I made use of a causal-comparative research design to compare GPA outcomes for students who did and did not participate in credit recovery. I used a quantitative, nonexperimental design in this analysis, involving an ex-post-facto research design to evaluate previously collected archival data as predictors of GPA at three alternative educational settings to ensure enough data for statistical validity. The students whose records were accessed completed or terminated involvement with the programs prior to the study.

An ex-post-facto research design is used when data have been previously collected and no extant participants will be used (Vogt & Burke Johnson, 2011). Previous researchers have used archival data to examine the predictors of graduation rates from alternative schools (Izuma et al., 2013). I considered other types of quantitative research designs, but ex-post facto designs are most appropriate when working with data from closed records (Creswell, 2012).

Simon and Goes (2013) indicated that the major benefits of an ex-post-facto research design are: (a) that the data has already been collected, (b) obtaining permission to collect data is less complicated because current participants are not used in the collection of data, and (c) the data collection process is less time-consuming because the collection of new data is not necessary. A problem associated with ex-post-facto designs, however, is that the researcher lacks control over the prior data collection methods (Creswell, 2012). As explained in the data analysis section below, I used regression techniques to evaluate and predict cumulative GPA from the ex-post-facto data.

Setting and Sample

Setting

The setting for this study included different alternative high schools that offer flexible instructional delivery methods, including credit recovery programs, for students who have dropped out of school prior to graduation and are now seeking their high school diploma. I obtained data from archival records from a Success Academies School District that consisted of three alternative high schools. I used multiple schools to ensure better representation of the target population and to ensure that I met the minimum sample size. The district's student population consisted of two groups: those who did and

did not participate in credit recovery courses. I did not manipulate participation in credit recovery programs as part of this analysis.

All three schools are located in a large urban area with high poverty levels. While the staff populations were multicultural at the time of the study, the student population was predominantly African American; 98% of students were African American, 1% were Hispanic, and 1% were Caucasian. Tables 2 through 4 present the racial breakdown in the neighborhoods where the schools were located by race, age, and households by type. Table 5 presents the racial breakdown of each school.

Table 2

Racial Breakdown of the Neighborhoods

	School site					
	Central		East		Southwest	
Race	*N*	%*	*N*	%*	*N*	%*
White	1,044	10. 2	1,296	5. 7	1,177	20. 9
Black/African American	8,535	83. 4	20,731	91. 1	2,320	41. 1
American Indian or Alaskan Native	46	0. 4	79	0. 3	34	0. 6
Asian	40	0. 4	64	0. 3	12	0. 2
Other	16	0. 1	3	0. 1	3	0. 1
Two or more races	173	1. 7	387	1. 7	133	2. 4
Hispanic or Latino and race	380	3. 7	166	0. 7	1,966	34. 8
Total	10,234	100.0	22,759	100.0	5,645	100.0

Note. Statistics are from U.S. Census Bureau's 2010 Census.
*Percentages do not add up to 100.0% because of rounding.

Table 3

Age Breakdown of the Neighborhoods

	School site					
	Central		East		Southwest	
Age	*N*	%	*N*	%	*N*	%
0 to14 years	1,916	18. 7	3,741	16. 4	1,131	20. 1
15 to 19 years	814	8. 0	1,745	7. 7	353	6. 3
20 to 24 years	922	9. 0	1,468	6. 5	446	7. 9
25 to 29 years	733	7. 2	1,125	4. 9	492	8. 7
30 to 85 years and over	5,849	57. 1	14,681	64.5	3,223	43. 0
Total	10,234	100.0	22,759	100.0	5,645	100. 0

Note. U.S. Census Bureau, 2010 Census.

Table 4

Households by Type of the Neighborhoods

	School Site					
	Central		East		Southwest	
Household type	*N*	%	*N*	%	*N*	%
Husband/wife Only	250	5. 9	1,020	9. 9	219	9. 6
Husband/wife with children under 18 years of age	194	4. 6	432	4. 2	224	9. 8
Male householder with no wife present	158	3. 7	406	4. 0	82	3. 6
Male householder with no wife present with children under 18 years of age	90	2. 2	202	2. 0	48	2. 2
Female householder with no husband present	554	13. 0	1426	13.9	230	10. 1
Female householder with no husband present with children under 18 years of age	689	16. 2	1202	11.7	304	13. 3
Nonfamily households	2,311	54. 4	5,582	54.3	1,172	51. 4
Total	4,246	100.0	10,270	100.0	2,279	100.0

Note. U.S. Census Bureau, 2010 Census.

Table 5

Racial Breakdown in Each School

	School site					
	Central		East		Southwest	
Race	*N*	%	*N*	%	*N*	%
American Indian/Alaskan native	0	0. 0	0	0. 0	2	1. 0
African American	355	97. 0	260	98. 9	112	50. 1
Asian	0	0. 0	2	0. 8	0	0. 0
Hispanic	5	1. 3	2	0. 8	79	35. 4
White	5	1. 3	1	0. 5	30	13. 5
Two or more races	1	0. 4	0	0. 0	0	0. 0
Total	366	100.0	263	100.0	223	100.0

Note: U.S. Census Bureau, 2010 Census.

Sample

A sample is defined as a subgroup of the target population that the researcher plans to study for generalizing about the target population (Creswell, 2012). I included closed records from students at three schools in this study. Each school has a capacity of 300 students, for a possible total of 900 students enrolled during the academic year. The schools have been in operation since 2005. The schools have two sessions—morning and afternoon—with an enrollment of approximately 600 students. In order to attend classes at the three schools, the students must be at least 16 years of age and cannot exceed 22 years of age. Closed records were available for approximately 2,000 students, but I did not use all available records. These students initially enrolled with a goal of completing a high school diploma; however, some students failed to complete because of life circumstances that resulted in either dropping out or stopping out.

I used multiple linear regression to compare the GPAs of subjects who did and did not participate in credit recovery, while controlling for demographic variables. An appropriate sample size was required to ensure statistical validity of the results. Using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009), I calculated a sample size for a multiple linear regression, using the following criteria: an effect size of 0.15, an alpha value of 0.05, and a desired power of 0.80. I determined the number of predictor variables from the number of parameters included in the model, which were four. This included one parameter for age, one parameter for gender, one parameter for socioeconomic status, and one parameter for credit recovery participation status. Initially, the sample size consisted of 85 students who participated in credit recovery courses, and 85 students who did not participate in credit recovery; however, there were two outliers that I removed from the sample size. This resulted in the minimum sample size of 84 students. I randomly sampled 84 students who received credit recovery instruction exclusively as well as randomly sampled an additional 84 students who received traditional instruction exclusively. This was to ensure balance in the important instruction variable and better chances to detect the lower effect size. The larger the sample, the less chance that the sample will be different from the population (Creswell, 2012).

Instrumentation and Materials

I made use of no instruments; I obtained all data from archival sources in the form of de-identified, raw data.

Data Collection and Analysis

I used archival data from the years 2011-12, 2012-13, and 2013-14 in this study. After the data were obtained from archival sources, I transferred the data into Microsoft

Excel for preprocessing. I used a separate column to code and collect the predictor variables including age, gender, socioeconomic status, type of curriculum, and dependent variable, GPA or cumulative require course grade. Table 6 presents the coding that was used in the study for each variable.

Table 6

Variables in the Study

Role	Name	Measure	Scale
Dependent Variable	GPA	Continuous	0-4. 0
Independent Variables	Age*	Continuous	Actual age of student (16-22)
	Gender*	Categorical	0= Male 1= Female
	Socioeconomic status*	Categorical	0= Qualify for free or reduced lunch 1 = Do not qualify
	Type of Curriculum	Categorical	0 = Traditional, 1 = Credit recovery

Note: *Age, gender, and SES also served as demographic variables.

I analyzed the data using IBM-SPSS version 24. The first step of the analysis was to develop summary statistics of the data with the use of frequency distributions, measures of central tendency and dispersion, and cross-tabulations to summarize the demographic characteristics of the sample and provide profiles of the participants in the study. Analysis took place for the research question and its respective hypotheses using a single multiple linear regression with GPA as the dependent variable and type of curriculum, gender, socioeconomic status, and age as the independent variables. I then used parameter estimates and associated significance to address both hypotheses. Appropriate assumption testing took place to ensure the validity of the model and results.

There are seven assumptions for a multiple linear regression. These include that: (a) the dependent variable must be continuous, (b) the independent variables must be either continuous or categorical, (c) the observations must be independent, (d) measures must exhibit homoscedasticity, (e) there must be no multicollinearity in independent variables, (f) there must be no significant outliers, and (g) residuals must be normally distributed (Katz, 2006). As a result of the methodological design, the first two assumptions were met, and I assumed that each student's GPA is independent from every other student. There was also no possibility of multicollinearity of independent variables because there was only one continuous independent variable. I ensured the normality of residuals by examining a histogram of the residuals and normality plots (see Figures C1 and C2 in Appendix C). I assessed the assumption of homoscedasticity by visually examining a plot of the residuals against the dependent variables and assessing that the scatterplot was visually random (see Figure C3 in Appendix C). Systematic changes in the residuals against the dependent variables may indicate a lack of homoscedasticity (Katz, 2006). I then accessed significant outliers by visually examining a box plot of GPAs versus type of curriculum.

Assumptions, Limitations, Scope and Delimitations

Assumptions of the Study

I presumed that the following assumptions were true (Vogt & Burke Johnson, 2011). I assumed that the raw data provided through the closed records were accurate and reliable. I assumed that the students who have attended Success Academies were motivated to graduate, but neither the reasons fueling that motivation nor the real-life issues that may have interfered with that goal could be determined.

The results of the study may be useful to directors and administrators of urban charter schools that possess characteristics similar to those of the Success Academies that participated in this study. Principally, those four characteristics are (a) the alternative schools are designed for the dropout populations, (b) the alternative schools are managed by a nonprofit company, (c) the alternative schools provide for credit recovery as a component of their curriculum, and (d) the alternative schools offer a high school diploma to students aged between 16 to 22 years.

Limitations of the Study

The following limitations affected the generalizability of the findings to other types of schools. The study was limited to alternative charter high schools with students from 16 to 22 years of age. It is not possible to generalize the results of this study to public or private high schools with traditionally aged students. The study was limited to closed records of students who had attended the Success Academies; therefore, the results cannot be generalized to other alternative education programs that follow different education protocols. The study was limited to closed records with no extant students included in the study. As such, the findings of the analysis may have limited generalizability to current student populations. Lastly, there was no random assignment of participants and no independent variables were manipulated, so the results will have limited generalizability.

Scope and Delimitations

The purpose of this study was to determine whether there were differences in the GPA of students at alternative schools who participated in credit recovery. I chose an ex-post-facto research design as the methodological framework for this study. The study was

delimited to the closed records of previously enrolled students who graduated from a charter school district with three urban charter high schools in a large Midwestern state. The study was delimited to 3 years of data: 2011-12, 2012-13, and 2013-14 academic years. I did not include student attendance as a graduation predictor because the state of Michigan grants attendance and seat-time waivers to schools that serve alternative education populations. I did not include student ethnicity as a graduation predictor because the ethnicity of the students was predominately African American. The study was delimited to students who had completed courses traditionally or through credit recovery. The inclusion of students who had completed courses traditionally, credit recovery, and both, would have required additional research to determine the impact of credit recovery on the likelihood of determining graduation success. The educational model of Success Academies was designed for overage and under-credited youth to complete only the courses needed to earn their high school diploma. As a result, many students have been enrollees at a minimum of three schools prior to attending Success Academy. The study was therefore delimited to a minimum of three schools, which included Success Academies. Lastly, the study was delimited to high schools in the city of Detroit. Several suburban school districts' curricula were based on a GPA that exceeded the traditional 4.0 scale, and a few of the suburban charter schools' curriculum were designed on a passing grading scale of A-D rather than A-F.

Protection of Participants' Rights

I obtained permission to conduct this study through the university's Institutional Review Board (IRB) to ensure the ethical treatment of human participants. I drew the data from the closed records of students who have either graduated or left the school prior

to graduation. I received the data in such a form that identifying information was no longer available; these data had been replaced with ID numbers for each student. I had no contact with any student, or with the identifying information of any student. Informed consent was not required for the study because students were not contacted, and no new information was obtained.

I obtained permission to collect data at the district level from the appropriate district head after IRB approval. The student data included: age, gender, socioeconomic status, high school grade point average, course completion percentage, and curriculum method of delivery. I stored the data on a password-protected, external hard drive in my office for the amount of time required by IRB approval. After this time, the data will be electronically destroyed by deleting it from the hard drive, and physically destroyed through physical destruction of the hard drive.

Data Analysis Results

In this section, I will present the results of the descriptive data and statistical analysis using multiple linear regression analysis. I used multiple linear regression to analyze the association between demographic characteristics and GPA, as well as the association method of curriculum delivery and GPA. The independent variables included credit recovery status, age, gender, and socioeconomic status. The dependent variable was meeting graduation requirements, as measured with GPA. I utilized IBM©SPSS® Statistics Version 22 to conduct the data analysis. The following research question and hypotheses guided this project:

RQ: How well does enrollment in credit recovery predict cumulative GPA as representative of graduation eligibility, while accounting for the influence of student demographic factors?

H_{01}: Student demographic characteristics do not significantly predict student GPA (cumulative required course grades) from an alternative high school.

H_1: Student demographic characteristics significantly predict student GPA (cumulative required course grades) from an alternative high school.

H_{02}: The delivery method of the curriculum (credit recovery or not) does not significantly predict student GPA (cumulative required course grades) from an alternative high school, when controlling for student demographic characteristics.

H_2: The delivery method of the curriculum (credit recovery or not) significantly predicts student GPA (cumulative required course grades) from an alternative high school, when controlling for student demographic characteristics.

Summary of Samples' Demographic Characteristics

This doctoral study involved a sample of 168 students comprising of 78 males and 90 females. Eighty-four of the students were provided with the credit recovery instruction, and 84 received the traditional instruction exclusively. There were slightly more female (53%, $n = 90$) compared to male (47%, $n = 78$) students. Based on the socioeconomic status data, 47% ($n = 78$) of the students were on the federal free and reduced-price meals program, while 53% ($n = 90$) received none. The mean age of the participants was 19.53 years ($SD = 1.349$), with the oldest and youngest students being 23 and 17 years old respectively. The students' mean GPA was 1.850 ($SD = 0.533$) with maximum and minimum GPAs of 3.357 and 0.727 respectively. Table 7 presents the

frequency distribution of students' demographic characteristics based on gender, SES, and method of curriculum. Table 8 shows the descriptive statistics of the students' GPA and age.

Table 7

Frequency and Percentage Summaries of Demographic Information

	Frequency	Percent
Method		
Traditional	84	50. 0
Credit recovery	84	50. 0
Gender		
Male	78	46. 5
Female	90	53. 6
SES		
Free or reduced	78	46. 4
Not free or reduced	90	53. 6
Age		
17	13	7. 7
18	23	13. 7
19	47	28. 0
20	42	25. 0
21	32	19. 0
22	10	6. 0
23	1	0. 6

Table 8

Summary of Descriptive Statistics for Demographic Information

	N	Minimum	Maximum	Mean	Std. Deviation
GPA	168	0.727	3.357	1.850	0.533
Age	168	17.00	23.00	19.53	1.349

Results of Test of Required Assumptions for Multiple Linear Regression

I conducted preliminary statistical tests before hypothesis testing. The assumptions involving multiple linear regression included tests of outliers, normality, and homoscedasticity. I assessed these assumptions using graphs and box plots.

Outliers. According to Leys, Ley, Klein, Bernard, and Licata (2013), outliers can have significant impacts on parametric tests such as regression by causing bias. Thus, outliers that are over three standard deviations from the sample mean should be omitted from the dataset (Leys et al., 2013). Two cases in the data set had GPAs that were three standard deviations below the mean; I omitted these cases from analysis. Though the GPA scores were within the stipulated range of 1 to 4, I eliminated two outliers from the data set.

Normality. As shown in Figure C1 in Appendix C, the histogram assumed a bell-shaped curve representing a normal distribution. Thus, I assumed GPA to be normally distributed. To test for normality of the residuals, I constructed a histogram of the standardized residuals from the dependent variables and normal P_P plots. Figure C2 in Appendix C shows a normal probability plot, which can be used to examine the normality of residuals.

Homoscedasticity. According to Creswell (2012), homoscedasticity refers to a situation where all the independent variables have similar error terms. The assumption of homoscedasticity is essential to linear regression models because it implies that the variance in the regression line is similar for all values of the independent variables (Creswell, 2012). As shown in Figure C3 in Appendix C, the distribution of data showed no evidence of a relationship.

Multicollinearity. According to Field (2005), multicollinearity at high levels ($r > 0.9$) increases the likelihood of making a Type II error. Based on the results of the collinearity statistics presented in Table 9, the likelihood of rejecting *R*, which represents the overall soundness of the model, or rejecting one or more predictors as statistically significant coefficients, was high. Based on the results of my data analyses, there was no correlation between the independent variables. I conducted additional tests for assumptions to ensure a comprehensive model and to enhance the generalizability of the findings to the entire population of students. Table 9 provides the variance inflation factors (VIF) for each predictor and the tolerance values

Table 9

Significance of the Independent Variables

Model		T	Sig.	Collinearity Statistics	
				Tolerance	VIF
1	(Constant)	3.770	0.000		
	Method	-1.674	0.096	0.980	1.020
	Gender	2.471	0.015	0.995	1.005
	SES	0.744	0.458	0.985	1.015
	Age	-0.802	0.424	0.971	1.030

According to Field (2005), VIF values that are below 10 and tolerance values that are greater than 0.2 indicate the presence of collinearity in data. Subsequent tests on the data indicated non-collinearity between the independent and dependent variables.

Multiple Linear Regression Results

I employed multiple linear regression to determine the relationship between age, gender, and socioeconomic status with GPA. The regression model also included the evaluation of the relationship between method of curriculum delivery and GPA. I conducted all statistical tests using an 0.05 level of significance.

Table 10 provides the regression results to address the two hypotheses that were tested for the study. I tested the first hypothesis to determine whether student demographics were a predictor of GPA from an alternative high school. I tested the second hypothesis to determine whether credit recovery was a predictor of GPA from an alternative high school. Based on the results, the model was a good fit of the data, F (4, 163) = 2.770, p = 0.029. As shown in Table 10, the R-square statistic was 0.064, indicating that 6.4% of the variance was explained by the independent variables. Specifically, the independent variables only captured 6.4% of the variance in GPA among the students. Further investigation of the individual effects indicated that only gender significantly predicted the students' GPA, t (163) = 2.471, p = 0.015. Based on the unstandardized beta coefficient value (0.20), the GPA scores for female students were significantly higher than their male counterparts because the unstandardized beta coefficient value was positive. On the contrary, SES (p = 0.458), age (p = 0.424), and method of curriculum delivery (p = 0.096) did not significantly predict the students' GPA. Thus, based on the higher female scores, I rejected the null hypothesis that the students' demographic characteristics do not significantly predict student GPA. Conversely, I did not reject the null hypothesis postulating that the delivery method of the curriculum does not significantly predict student GPA.

Table 10

Regression Model Coefficients for GPA with Three Predictors

Model	Unstandardized coefficients		Standardized coefficients
	B	*SEB*	*β*
Constant	2.257	0.599	----
Credit recovery (1 = yes, 0 = no)	-0.136	0.081	-0.128
Gender (Female = 1, Male = 0)	0.200	0.081	0.188*
SES (Free/reduced lunch = 1, none = 0)	0.061	0.081	0.057
Age in years	-0.024	0.030	- 0.062

Note. In the model, $R = 0.257$, $R^2 = 0.064$, F (4, 163) = 2.770, and $p = 0.029$.
*Significant at level of significance of 0.05.

The purpose of the study was to examine the relationship between a credit recovery program with the demographic variables of age, gender, and socioeconomic status and high school GPA, which served as a proxy to graduation eligibility. The results of the multiple linear regression model indicated that only gender significantly predicted student GPA. Specifically, female students have greater GPA scores compared to their male counterparts. On the contrary, the students' SES and age did not significantly influence their GPA. In addition, the method of curriculum delivery did not significantly influence GPA when controlling for student demographic characteristics. Moreover, the results of the study suggest that improvements are needed in the areas of program delivery and training. Based on these findings, I created the project deliverable in the form of a detailed, 3-day professional development training program.

Role of the Researcher

I have held various roles within the district of Success Academies. As the author of this doctoral study, I am also the assistant superintendent for the district. Further, during the 3-year period of data collection for this study, I was the curriculum director.

My personal bias regarding the research was mitigated by two design choices. First, the decision to use an ex-post-facto research design eliminated the need for my personal interaction with staff, faculty, or students for the purpose of conducting this research. Second, I masked the student's identifier information in order to eliminate any potential bias that may have been caused by my familiarity with the student information in the archived files, and I assigned each of the student files an ID number in its place.

Summary of Findings

The purpose of the study was to assess the relationship between a credit recovery program with key demographic variables and high school GPA, a graduation antecedent, for students in an alternative school. In this section, I presented the descriptive data and multiple linear regression analysis results. The result of the multiple linear regression model indicated that only gender significantly predicted student GPA. Specifically, female students have greater GPA scores compared to their male counterparts. In contrast, the students' SES and age did not significantly influence GPA. In addition, the method of curriculum delivery did not significantly influence GPA when controlling for students' demographic characteristics.

Section 3: The Project

Introduction

A professional development program was the selected genre for this doctoral study. The local problem was unsatisfactory graduation rates in an alternative school that offered credit recovery. I conducted a quantitative, ex-post-facto study using 3 years of historical data to determine the effectiveness of the credit recovery program. I used the following question to guide the research study: How well does enrollment in credit recovery predict cumulative GPA, as representative of graduation eligibility, while accounting for the influence of student demographic factors? I found that while the demographic variable of gender was a predictor of GPA, credit recovery was not a predictor of graduation as measured by GPA.

In this section, I will provide an outline of the 3-day professional development project that I devised based on the study findings. The findings of this study may have implications for the credit recovery program through the provision of professional development on providing a curricular structure, blended learning, and a data accountability system that supports teaching and learning for academically deficient students. In addition, the results of the study may provide educators with practical interventions for credit recovery students in an alternative charter school as it relates to age, gender, and socioeconomic status. The implementation of the 3-day professional development project (see Appendix B) supports both job-embedded and ongoing professional development training for the teachers and staff.

Description and Goals

The implementation of the 3-day professional development project has four objectives to support the development and implementation process. The purposes of these four objectives are: (a) to develop the curricular components for the credit recovery program; (b) to develop a data tracking system for students who are enrolled in the credit recovery program; (c) to implement data management procedures for documenting credit recovery courses on the students' transcripts; and (d) to implement a program evaluation plan to evaluate the effectiveness of the credit recovery program. It was my presumption that achieving these goals should result in a reduction of the dropout rate, as well as the provision of information to determine the effectiveness or ineffectiveness of the credit recovery program.

Rationale

I chose a professional development genre project for this doctoral study. Credit recovery allows students to retake previously failed courses for the purposes of meeting 4-year graduation cohort requirements (Brown, 2012; Duffey & Fox, 2012; Franco & Patel, 2009). The goal of credit recovery is to improve high school graduation rates; however, there must be criteria by which the program can be evaluated to determine the program's effectiveness. Sparks (2013) observed that credit recovery programs require components and guidelines in order to develop an evaluation process.

Success Academies have been operating a credit recovery program since the academies' inception in 2005. Single-digit graduation rates for nearly 8 consecutive years prompted the need to evaluate the credit recovery program. I conducted an ex-post-facto study to answer the following research question: How well does enrollment in credit

recovery predict cumulative GPA, as a representative of graduation eligibility, while accounting for the influence of student demographic factors? The data collection process involved collecting an archival random sample of relevant data from student records for students (n = 84) who had participated in credit recovery and student records for students (n = 84) who had not participated in credit recovery. The results showed that GPA did not have a significant relationship on credit recovery. While age and SES did not show a relationship, gender-being female-was a predictor of graduation.

The data collection process for the ex-post-facto research study proved to be a time-consuming and arduous task for several reasons. As a result of incomplete and missing file folders, I obtained the electronic version of the archived student records for the purposes of determining method of course participation. These electronic student records consisted of student transcripts. In reviewing the students' transcripts to determine credit recovery or traditional course enrollment, it was apparent that additional information was needed to properly document the transcripts. Given the lack of a descriptor that readily identified credit recovery courses on the student transcripts as well as the absence of a credit recovery curriculum, I concluded that a professional development recommendation was essential for determining program effectiveness.

Review of the Literature

I sourced relevant works of literature from different databases. The searches generated more than 40 published journals, including 25 journals that I selected as meeting the criteria of this doctoral study. The high school dropout rate in the United States is high, with nearly one third of students dropping out of high school before graduation (Smith & Thompson, 2014). Researchers have identified several important

factors that cause high school students to drop out. Among these many factors are a loss of motivation due to poor grades, failure in different courses, and a lack of self-confidence. According to the theory of motivation, when people become motivated, they tend to achieve higher goals by their own pleasure and enthusiasm (Ryan & Deci, 2000; Schunk & Zimmerman, 2008; Sha et al., 2012). Self-motivated students have a precise academic goal to achieve, which stimulates their self-confidence and their ability to achieve the required credits for graduation (Dwyer et al., 2012; Kronholz, 2011). The current pedagogical system of education, however, is ineffective in encouraging students to earn the required credits for high school graduation. Researchers have also argued that the pedagogical system of teaching does not improve students' learning, but rather diminishes the motivation of school-going students (Bedi, 2004; Knowles, 1984; Ozuah, 2005; Samaroo et al., 2013). The result of this ineffective pedagogical education system is a disconcerting dropout rate (Blount, 2012; Joo & Kim, 2014; Stark & Noel, 2015).

In order to determine the actual reasons for dropout, the impact of different socioeconomic variables was examined. Among these socioeconomic variables, several were frequently analyzed in the literature, including students' geographical locations, ages, family backgrounds, financial situations, maternal characteristics, ethnicities, language barriers, and levels of disengagement (Blount, 2012; Hupfeld, 2007; Joo & Kim, 2014; Jordan, Kostandini, & Mykerezi, 2012; Rumberger, 2011). On the contrary, Marshall et al. (2014) identified different academic variables as having a significant impact on student dropout rates such as academic rules, teacher-student relationships, institutional practices, and grading policies. In their review article, Bowers et al. (2013)

identified 110 predictors of dropout; among these predictors, behavioral problems, low grades, and poor attendance were the strongest.

The online credit recovery program was designed to reduce the serious dropout problem in the United States. This program aimed to attract students who had dropped out. Since this time, however, there has been very little research focused on measuring the impact of the online credit recovery program. In one study on the effect of the credit recovery program, the researchers revealed that improper strategies of the institutions offering the program and an unstructured program are common reasons for its failure (Iachini et al., 2013; Lagana-Riordan et al., 2011). While the credit recovery program has proved to be a potential solution to the dropout problem, the traditional education system is negatively affecting the rate of graduation (Cullen et al., 2013; Genao, 2014; Izuma et al., 2013; Smith & Thompson, 2014). Although various scholars have suggested that alternative education has a positive impact on reducing the national dropout rate, these researchers have not shown how alternative education programs meet the socioeconomic, academic, and emotional needs of the students. In addressing this issue, Smith and thomson (2014) stated that alternative education programs provide educational services tailored to dropped-out students that the traditional education setting cannot. The credit recovery program thus effectively helps students who are especially academically-deficient in the traditional system, and the program has shown to be very effective in helping students earn the required credits for graduation (Gurung & Rutledge, 2014; Heppen, 2015).

Researchers have suggested that apart from academic and behavioral failure, physical aggression, substance abuse, and possession of firearms also be important

reasons for dropping out of school (Simonsen & Sugai, 2013). Simonsen and Sugai further advised that programs like the credit recovery program should focus on mitigating the many challenges faced by its students. Because credit recovery programs—like most alternative education programs—are offered online, I aimed to assess the effectiveness of an online program. Findings from different studies reveal that online courses are perceived to be easy, less time-consuming, and more engaging—all of which help attract students who have left the traditional education system (John et al., 2015; Lewis et al., 2014; Pettyjohn & LaFrance, 2014). According to Lewis et al. (2014), the goal of online learning programs is to provide an alternative to the traditional education system. Eno and Heppen (2014) concluded that online programs are effective when they aid students who have dropped out or are at risk of dropping out; a recent study suggests that the popularity of online courses is increasing in many areas of the country (Pettyjohn & LaFrance, 2014; Volkerding, 2012). On the contrary, some researchers have argued that online courses still do not have universal acceptance (Palardy, 2013; Wolff, 2014). Researchers have also shown that online programs are often not structured properly to benefit the students, as the programs do not offer face-to-face interaction, close guidance, or help to improve the students' writing style or quality of work (Freeman & Simonsen, 2014; Spitler et al., 2013). Another issue identified from the research is that online programs require sophisticated technology, but many institutions fail to ensure the required technology; this, in turn, causes the programs to fail (Cardak & Vecci, 2015; Volkerding, 2012). Due to such issues identified in various studies, online credit recovery programs are not able to meet the expectations of policymakers (Picciano et al., 2012). Carr (2014) asserted that the lack of empirical data on credit recovery programs has

resulted in an unclear relationship between online courses and graduation rates. Many researchers have clearly indicated the difficulty of collecting reliable data about the students who enroll in credit recovery programs (Clements et al., 2015; McCabe & St. Andrie, 2012). Further studies on credit recovery programs have revealed that a lack of a systematic structure is a cause for program failure (Sparks, 2013). Improper curricular delivery methods could be another factor as to the reason that credit recovery programs are failing to meet the expectations of policymakers.

In a review of the literature on the topic, I found evidence of the many potential benefits of online credit recovery programs, but these data do not provide enough information to draw a conclusion about the impact of credit recovery programs on the graduation rate. In terms of measuring the impact of the online credit recovery program, I identified some major issues that could cause program failure. Among the identified issues, the following are most notable: improper structure of the program, socioeconomic variables, technological barriers, academic failures, and disengagement of students. Past researchers have revealed different scenarios of dropout in the United States. Blount (2012) reported that students between the ages of 16 and 24 have higher dropout rates, with that of male students (7.3%) exceeding that of female students (5.9%). This author also reported that among these students, Hispanics (18.3%) have the highest dropout rates, followed by Native Americans (14.6%), African Americans (9.9%), and Caucasians (4.8%). Stark and Noel (2015), however, presented a different scenario regarding the ethnicity of students who drop out; in their report, they found Native Americans to have the highest rates (14.6%), followed by Hispanics (12.7%), African Americans (7.5%), and Caucasians. The topics covered in this literature review suggested

a solution to the identified issues in order to ensure the maximum possible positive impact of the credit recovery program. Subsequently, the outcomes of the implementation of the professional development would help to determine the overall impact of the credit recovery program.

Project Description

Implementation

The initial support to collect data for my study was given by my immediate supervisor. The superintendent provided written permission for the collection of the school district's data for the purposes of conducting my study on our credit recovery program. The continued support of implementing professional development training for the credit recovery program is dependent upon the presentation of the research outcomes to the superintendent, in addition to approval from the superintendent for project implementation. The approval for project implementation included the presentation of the research findings over a 3-week period to the superintendent, authorizer, the Board of Directors, the principals, teachers, school staff, technology vendor, online courseware vendor, parents, students, and other stakeholders.

Resources and Existing Supports

The implementation of the professional development will be phased in over a 3-year period. Success Academies will be able to leverage its current resources and existing resources in the areas of support and commitment from executive management, school leadership and staff; job-embedded and sustainable professional development; employment of technologically-advanced data management features; and flexibility and customization of the online courseware curriculum. The support of executive

management will be reflected in authorizing the time and fiscal resources to facilitate the implementation of the professional development at optimal capacity. Professional development training for the teachers and staff is offered by the authorizer, and other educational institutions at no charge or nominal charges. The federal and state grants support the improvement of instruction, and stipends for curriculum and school improvement meetings. There is funding available for professional development, as well as stipends for curriculum and school improvement meetings. The data management system has the capacity to document credit recovery features on the student transcript. The school district must provide detailed information regarding their courses and grading policy, and this function will be programmed into the data system. There is online courseware to support the credit recovery courses; the courses will be coded as credit recovery for the purposes of separating the traditional courses from the credit recovery courses. Similarly, the flexibility to customize the courses in the blended learning curriculum will allow the teachers to design or modify the course requirements and the grading system.

Potential Barriers

There may be several potential barriers to implementing the ongoing professional development for the credit recovery curriculum with integrity and fidelity. These potential barriers are time for professional development and staffing capacity to support the implementation of the credit recovery component of the curriculum. Success Academies is a non-traditional, year-round school. The continuous rolling enrollment, as well as the student-paced credit attainment, makes it difficult to determine an efficient time for training the staff. A potential solution is to survey the staff for date and time

preferences that are beyond the school schedule. The selected evenings and/or Saturdays would be the time used to develop the professional development. Ongoing professional development training in the form of train the trainer(s) could be employed for the purposes of building capacity and sustainability for the various committees.

In addition, increased staffing over a 3-year period will be necessary for the full implementation of the professional development training in the areas of blending learning, curricular structure, disaggregation of data, data management, and program evaluation. The blended learning method of curriculum delivery for students who require academic and technological support will require additional teachers. Within a 3-year period of the implementation, each school will consist of the following staff: three teachers in the areas of math and English, and two teachers for science, social studies, and special education. The number of health and physical education, and elective teachers will remain the same, with one teacher per each subject area. Currently, the three Academies employ two teachers each in the areas of English, math, and special education, and one teacher each in the areas of electives, science, social studies, and health and physical education. The positions of student enrollment, course scheduling, and data management are supported by an enrollment specialist, a high school guidance counselor, and a data specialist at each of the three schools. Full implementation by Year 3 will require two counselors at each academy. One counselor will be assigned to the students enrolled in primarily traditional courses, while the other counselor will be dedicated to the students enrolled in the credit recovery program. It will be suggested that implementation of Year 1 will be defined by only the students enrolled in the blended learning courses for math and English. The staffing capacity to support this

implementation would be the hiring of an additional math and English teacher. During Year 1, these teachers will be employed amongst the three academies in the credit recovery program. Year 2 of the implementation of the professional development, will include the students enrolled in the science courses. The math and English teacher who was hired in Year 1 to work at the three schools in the district, will be assigned to the school with the largest enrollment. For Year 2 of the implementation, a math and English teacher will be hired for employment at the remaining two schools. Similarly, a science teacher will be hired to work amongst the three schools in the blended learning program. Year 3 will represent full implementation of the credit recovery program, in addition to the opportunity to implement the program evaluation tool to evaluate the credit recovery program.

Proposal for Implementation and Timetable

The superintendent gave written permission for the data collection process that was necessary to conduct my study. I will need my supervisor's permission to present the findings to the management company board, the authorizer, and himself. Once permission is received to proceed with the development of the professional development for credit recovery, the planning and development phases can occur. The professional development must be approved by the school board for implementation. The ideal timeline for presenting the research outcomes and recommendations to the management team would be the fall of 2018.

Roles and Responsibilities of Others

I will present the research findings to the executive management team, board members, the authorizer, vendors, school leadership, staff, students, parents, and other

community stakeholders in order to garner buy-in and commitment for the development and implementation of the professional development. This commitment would be established through the participation of a committee over a minimal period of 3 years. Participation in the selected committee would require a sustained period of professional development training. The establishment and participation in the various committees would convey a commitment to the mission and vision of Success Academies, as well as a commitment to continuous improvement and social change.

Project Evaluation Plan

The evaluation of the professional development training will be measured according to the goals used to develop the committees that will support academic and technological readiness for at-risk youth; and provide data management procedures that will foster an accountability system for the credit and recovery program. These four objectives will be to (a) develop the curricular components for the credit recovery program; (b) develop a data tracking system for students who are enrolled in the credit recovery program; (c) implement data management procedures for documenting credit recovery courses on the students' transcripts; and (d) implement a program evaluation plan to evaluate the effectiveness of the credit recovery program.

The project evaluation will be conducted on a formative basis using three survey instruments. During the 3-day professional development training, a pre- and post-survey will be administered each day to assess learning. In addition, a five-item survey will be used to assess perceptions of progress and training expectations. The five-item survey will also be used to assess progress and training expectations during the ongoing professional development training of each committee. Students will also have an

opportunity to evaluate the credit recovery program. These students will be invited to complete a 10-question survey regarding their learning experiences in the courses. The quality of the professional development training for the committees will be reflected in the effectiveness of the credit recovery program. At the conclusion of each school year, Michigan's Program Evaluation Tool will be used to evaluate the various components of the credit recovery program, as applicable. The key stakeholders in the evaluation process will be the executive management, the authorizer, the board members, school leadership, and the students.

Project Implications

Local Community

The successful implementation of the professional development may provide information for the authorizer to re-define the educational goals which may lead to re-authorization of Success Academies for an additional 7 years. The implementation of the professional development over a 3-year period could provide local schools with best practices, information on leveraging current resources, resolutions for barriers to program implementation, and a possible model to replicate in the schools or districts. The ongoing implementation and continuous improvement of the professional development may result in both the significant improvement in the high school graduation rates among minorities, and access to postsecondary opportunities.

Far-Reaching

The research findings, the implementation of the professional development, including the professional development offerings, and the project evaluation may contribute to the limited quantitative research on the effectiveness of credit recovery

programs. This quantitative research study has the potential to provide empirical data and best practices research for developing or modifying the curriculum designs at alternative schools that offer credit recovery programs. The outcomes of the study on the program effectiveness of the professional development may result in information that is useful for policy makers. This information may influence policy changes and funding requirements for credit recovery initiatives at the local and national levels.

Conclusion

The purpose of the project study is to provide a plan for the appropriate genre to address the district's local problem. The researcher's failure to reject the hypothesis that credit recovery had a significant impact on GPA as a predictor of graduation and literature suggesting that alternative high schools can be successful in assisting at-risk students through graduation, I deemed a professional development plan to be appropriate for this project study. The lack of clear Success Academies' history of not identifying the students who were enrolled in credit recovery courses, the need to identify a credit and recovery curriculum, the need for descriptors on the transcript for credit recovery courses, and the need for an evaluation method combined to provided an explanation and a structure for the description of the goals. These considerations provided objectives that I used to develop the topics to support the review of the literature.

At the time of the data collection period, Success Academies had been offering credit recovery courses for 6 years. The existing operation of a credit recovery program was deemed as an advantage to the development of the professional development. The leverage of existing resources, identify potential barriers and proposed solutions to these

barriers would improve the timelines for the implementation of the professional development.

The implementation of the professional development will require time for the presentation of the research findings to the key stakeholders, professional development training for the various committees, and establishment of the credit recovery components necessary to determine program effectiveness. Phasing in the professional development training over a 3-year period will allow for staffing expansions, selected course offerings, and sufficient time for staff to develop expertise. These considerations will ensure implementation with fidelity and sustainability of the credit recovery program.

Section 4: Reflections and Conclusions

In this section, I will focus on the research and learning processes of the project study. The subsections that are included are project strengths and limitations; recommendations for alternative approaches; scholarship, project development and evaluation, and leadership and change; reflection on the importance of the work; implications, applications, and directions for future research; and conclusion.

Project Strengths and Limitations

Project Strengths

One strength of this study was that the research findings revealed the necessity of examining the curricular structure and the data management system of the credit recovery program. This indicates that continued evaluation of the program is necessary. Another strength was the study's alignment with the finding from the review of the literature that gender is a predictor of GPA. The results of the multiple linear regression model indicated that only gender significantly affected student GPA. I therefore supported the alternative hypothesis suggesting that demographic characteristics could significantly predict student GPA from an alternative high school, albeit for gender only. This finding is consistent with those of a previous study by Stark and Noel (2015), who evaluated high school dropout and graduation rates in the United States. According to Stark and Noel, males aged 16 to 24 years have a higher dropout rate compared to females at 7.3% and 5.9%, respectively. My study findings were also congruent with Blount's (2012), who found that male students have significantly higher dropout rates compared to females. Jordan et al. (2012) found that in addition to other variables, gender significantly influenced graduation rates among both rural and urban students.

Finally, an important strength of the study was the learning that took place during the data collection process that was required to gather the data that were used in the regression analysis. This learning was strongest regarding the dichotomous variable of credit recovery participation. Without detailed studies of the data records themselves, there was no clear way to ascertain whether students had even participated in these credit recovery courses. This information provided principles for the professional development project that resulted from the findings. The difficulty in accurately deducing credit recovery participation may have weakened the study by confounding the credit recovery data that I analyzed.

Limitations of the Study

Research on online courseware providers is primarily anecdotal and lacks empirical evidence regarding its effectiveness (McCabe & St. Andrie, 2012); therefore, the specific courseware that I used in the project study was not included in the analysis of the study. The findings of the study revealed the need for professional development training for staff to improve the teaching and learning for the at-risk youth in the credit recovery program. Job-embedded and ongoing professional development training will be required for determining program effectiveness.

Recommendations for Alternative Approaches

Based on the results of the current study, I recommend the following alternative approaches to conducting a similar research study. These alternative approaches include increased sample size, use of primary data, and the inclusion of qualitative research approaches in the study. Although I used G*Power 3.1 (Faul et al., 2009) to select an appropriate sample size, a wider scope of schools that used the same method of

curriculum delivery would have increased the generalizability of the study. Achieving such generalizability would require a larger sample of alternative schools that use online courseware in a blended learning setting for credit recovery. I also recommend that further researchers should use primary data rather than archival data. According to Creswell (2012), the use of primary data may limit the effects of confounding variables, which cannot be controlled for when using archival data. Lastly, the use of qualitative research methods may provide a deeper understanding of the perceptions and experiences of the students and teachers who engage with both credit recovery and noncredit recovery courses in the alternative school settings. This inclusion of these additional data and perspectives may strengthen future educational improvement efforts within alternative school settings.

Scholarship, Project Development and Evaluation, and Leadership and Change

Scholarship

The current doctoral study was a culmination of a research study combined with a project study. In addition to sharpening my writing, literature synthesis, and data analysis and interpretation skills, I have developed additional knowledge to create a practical project that is data driven and responds directly to a real-world problem. The cognition process of Bloom's Taxonomy is described as one's ability to progress from the basic level of memorization to the skill levels of application and development (Anderson & Krathwohl, 2001). The doctoral study represents an opportunity to develop a deeper level of knowledge, as defined by Bloom's taxonomy; therefore, it is the completion of both a research study and a project study that represents the true meaning of being a scholar-practitioner.

Project Development and Evaluation

The literature review and the data collection process were pivotal to my identification of professional development as necessary to evaluate program effectiveness. Sparks (2013) indicated that credit recovery programs require components and guidelines to develop an evaluation process. I learned that the goals of the policy were key to determining program criteria, professional development, and a method of evaluating the professional development. I also learned that project development and evaluation must be implemented as school-wide initiatives. The implementation of professional development training with fidelity requires building capacity for ongoing and continuous improvement to ensure the sustainability of the credit recovery program.

Leadership and Change

I have learned that effective leadership and change are essential to the sustainability of the school-wide implementation and evaluation of reform initiatives. In many districts, teachers are skeptical regarding changes to these school-wide initiatives. This skepticism is a result of a school culture that is reflective of a continuous abandonment of the current initiatives to adopt new initiatives. The decision to abandon the current initiative and adopt a new initiative usually stems from changes in leadership. In the 8 years of the target school's existence, there have been changes in the management company, school authorizer, structure of the public-school academy, the online courseware provider, board of directors, and school leadership. These changes had an impact on my ability to evaluate program effectiveness. It was critical to the validity of this research process that the information that I used for data collection would minimize these changes. The selection of the timeframe for the study was a direct result

of consistency with the school-wide initiatives, school structure, online courseware, and school leadership.

As a result of the fast-paced trend of turnover at the school leadership and management levels at Success Academies, I have learned that the sustainability of the professional development training will require board approval. The approval of the implementation of the ongoing professional development by the board of directors may ensure that hiring, staffing, stipends, technological and computer costs, supplies and materials, and training expenses are supported and funded during the 3 years that are required to implement the new credit recovery program. The opportunity to phase in the professional development training to develop the credit recovery program would help to ensure commitment to continuous improvement, reliable and viable data collection, and implementation with fidelity.

Analysis of Self as Scholar

I have learned that completion of the doctoral study requires passion for the area of research study, self-determination, and a mindset of impacting social change. The scholarship level required to complete the doctoral study is time and research intensive. It has been my experience, however, that a genuine interest in a specific area of research would promote lifelong learning. The trials and tribulations of life does not stop once the researcher begins a doctoral program. The completion time for the doctoral study can be as long as 7 years. It is self-determination that will progress the researcher from a doctoral candidate to the accomplishment of Doctor of Education. This educational milestone will be the catalyst for the researcher to use the research findings to contribute to the literature review. Finally, it is the mindset of impacting social change that will

galvanize the researcher to expand on the original research findings or to continue doctoral level research in the area that will improve the inequities of marginalized people.

Analysis of Self as Practitioner

As an education practitioner, I have learned that the transformation of my doctoral study over the past 2 years, has been a direct result of collaboration, criticism, and reflective practice. Initially the focus of my study was on credit recovery and improving graduation rates in in an alternative setting. It was collaboration amongst—as well as criticism from—my committee members that gave depth to my research study. The countless phone conferences with the committee members involved clarifying and probing questions, suggestions, and recommendations. This form of communication dialog is designed to gain a deeper understanding of the researcher's motivation for conducting the study. The rubric scoring and comments on the various doctoral assignments were also numerous sources of feedback intended for developing and improving the doctoral study.

While the wealth of information may be provided to the researcher, it is up to the researcher to accept and apply this information to the study. At one point in time, I viewed the collaboration and criticism as mere hindrances to my doctoral completion date. The focus of my study evolved to include using predictor and demographic variables and GPA in order to test my hypotheses regarding the impact of credit recovery on graduation in an alternative high school. It is through reflective practice that I can now appreciate those once viewed time hindrances as opportunities of reflective practice. These opportunities for reflective practice have provided depth and richness to the study,

a methodological research design that could be duplicated by other researchers, and research findings that contribute to the field of scholarly research.

Analysis of Self as Project Developer

Project development requires the identification of the local problem, review of the literature, methodology design, interpretation of findings, and the proposal for a project study. I have learned that there is tendency for the researcher to focus on the outcomes of the testing the hypotheses. Each component of the research process, however, is integral to the research findings. The research process can be crucial to identifying gaps in practice. It is these gaps in practice that can reveal the appropriate genre selection for the proposed project.

I have also learned that project development must be viewed as a school-wide implementation initiative. Phasing in the implementation of the credit recovery process over a 3-year period would allow sufficient time for buy-in, budget and staffing considerations, professional development, and program evaluation. The phasing in the process of the project would garner support and participation from the staff and ensure the implementation of the project study with integrity and fidelity.

Reflection on the Importance of the Work

Credit recovery is an alternative to course repetition for students who have previously failed a course that is needed for high school graduation (Zinth, 2011). Students who require credit recovery represent a large portion of the dropout and re-enrollee high school population (Picciano et al., 2011). Scholars have envisioned credit recovery programs as the solution to increase graduation rates across the country (Mileaf et al., 2012); however, despite the benefits of credit recovery programs, there is limited

available information pertaining to their effectiveness. The importance of this doctoral study was that quantitative research was used to inform practice at the local level in the areas of demographics, method of curriculum delivery, and program evaluation. Based on the findings of this project, only gender significantly influenced student GPA. Specifically, female students have higher GPA than their male counterparts.

The demographic variable of age plays a key role in the marketing of Success Academies. This unique program feature extends the age of students obtaining a high school diploma to age 22. In the state of Michigan, students can earn a high school diploma through the age of 19. It is Success Academies' targeted population that garners the extended age range. The targeted population of homeless youth grants Success Academies the authority to include students ages 20-22 in its offerings of a high school diploma. Despite the extended age range, the current research findings did not show that age was a predictor of GPA. This revelation could be as a result of overage and uncredited adults being embarrassed of participating in high school activities. One of the school administrators a Success Academies indicated that within the last 2 years, the graduates over the age of 20 have declined to participate in both the proms and the graduation ceremonies (personal communication, April 25, 2017). Scholars could use this information to deemphasize the older age feature and perhaps focus the efforts at the appropriate age levels.

The student population of Success Academies represents at-risk youth. I found that SES was not to be a factor in predicting GPA. The proxy for SES is the free and reduced lunch form. This finding could be the result of the instrument used to determine SES. Additional research in this area could provide more detailed information.

Though the research findings did not reveal that method of curriculum delivery was a predictor of GPA, it did reflect a gap in practice. This gap comprised the missing components of the credit recovery program. Without these components, determining program effectiveness or ineffectiveness was deemed impossible. The implementation of this professional development will provide the necessary components to evaluate program effectiveness.

I have learned that the importance of the study extends beyond the local level. The findings of this research may be beneficial in providing information and interventions to educators a in similar schools that offer credit recovery. The use of quantitative research—as opposed to perception research—contributes to the empirical research on schools that offer credit recovery. In addition, the professional development plan and program evaluation may be useful for school districts and policymakers.

Implications, Applications, and Directions for Future Research

The credit recovery initiative was designed to improve the high school graduation rates. Given the proper or adequate training to improve the weaknesses in the credit recovery program, the results of this study have the potential to support positive social change at the local, student, and societal levels. The development of a new credit recovery program that supports teaching and learning for students with academic deficiencies will ensure that at-risk students will have an opportunity to earn a high school diploma. The improvement of Success Academies' graduation rates may garner renewal of the charter by the authorizer for an additional 7 years. The sustainability of the schools will allow more overage and under-credited students to graduate with a high school diploma. Students who earn a high school diploma are more likely to access

postsecondary options, earn a livable wage, and contribute to the economy. High school graduates are less likely to be incarcerated, unemployed, or receiving public assistance.

Self-determination theory and adult learning theories were the theoretical underpinnings of the study. These theoretical underpinnings have implications to inform practice for educators and policymakers. The new development of a credit recovery program that consists of a curricular structure, and components that offer pre-and testing, course durations, and a grading system that is designed to improve their GPA, would ensure self-motivation, confidence, and the students' ability to take ownership of their education. In addition, the delivery method of instruction for the credit recovery program must be adaptable for both the students who are self-directed, and for the students who require teacher-led instruction. The Success Academies has used several online courseware providers since its inception. *Edgenuity*, formerly known as E2020, was the online courseware provider that was used to deliver credit recovery during the 3-year data collection period. As an administrator of Success Academies, I am aware that prior to the data collection period, *Apex*, was used as the online courseware program for the credit recovery courses.

The Success Academies has used several online courseware providers since its inception. *Edgenuity*, formerly known as E2020, was the online courseware provider that was used to deliver credit recovery during the 3-year data collection period. As an administrator of Success Academies, I am aware that prior to the data collection period, *Apex*, was used as the online courseware program for the credit recovery courses. Applications for research at the local level would be assessed (see Appendix B) with selected criteria for choosing an online content provider. The selection must be for the

delivery of credit recovery in a blended learning environment. The same rubric could be used for ongoing evaluations in order to determine the effectiveness of the online courseware.

Future directions for research would be the adoption of state-approved credit recovery list of vendors that meet a pre-approved list of criteria. Schools would not be required to use the state-approved vendor list; however, dropout prevention initiatives, accountability, and funding could be linked to improving graduation rates. This adoption could provide a quality element to the credit recovery courses, curtail the criticism of credit recovery programs, and hold online vendors accountable for student achievement. Another future direction of this study would be the continued research in the affective domain among alternative and at-risk youth students, as pointed out by researchers of Michigan State University (MSU). As an administrator of Success Academies, I was invited to participate in a research study conducted by MSU in partnership with the parent organization of Success Academies. The question that guided the mixed method study was: "How do social processes in second-chance high schools facilitate personal and academic development for disconnected youth?" Although the study was limited to 1 year due to financial constraints, the preliminary information gleaned from the research was insightful. The researchers indicated that the longitudinal quantitative and qualitative findings at the school levels may influence programming for schools that are designed for homeless students who have dropped out.

Conclusion

The purpose of this quantitative study was to examine the effectiveness of credit

recovery in improving high school graduation rates among students in alternative schools. The research question that guided this study was: How well does participation in the credit recovery process at Success Academies, predict GPA as a likelihood of graduation from an alternative high school, while accounting for the influence of student demographic factors? Based on the findings of the study, I found that only the female gender was a predictor of students' GPA; however, the students' SES, age, and method of curriculum delivery did not have an impact on their GPA. As a result of the outcomes of my research, I selected a 3-day professional development program as the project study to address the deficiencies in the credit recovery program.

Credit recovery programs are designed to improve the graduation rates for at-risk youth. Carr (2014) asserted that the lack of empirical data on credit recovery programs has resulted in an unclear relationship between online courses and graduation rates. The results of this research study highlighted concerns with the impact of credit recovery on program effectiveness. These concerns stemmed from limited empirical research, a lack of credited recovery guidelines, and insufficient methods of curriculum delivery.

The evaluation of the effectiveness or ineffectiveness of credit recovery program was hindered by the ability to examine isolated information. This isolated information was based on local management of credit recovery programs, and unknown student enrollment in credit recovery programs. The number of students enrolled in credit recovery was difficult to determine because of minimal government regulation (McCabe & St. Andrie, 2012). Further, online courseware providers do not disaggregate the data that are used for traditional courses supplementary courses, or credit recovery courses (McCabe & St. Andrie, 2012). Without the disaggregation of this data, it was difficult

for me to determine program effectiveness or program ineffectiveness. The professional development will ensure the tracking of students enrolled in credit recovery courses. The online courseware provider will be required to categorize the courses that are used for traditional, credit recovery, or enrichment credit. The teachers will customize the curriculum of these courses and label them as credit recovery. This pathway will ensure the proper tracking and documentation for information for credit recovery courses on the students' transcripts.

In addition, the lack of an academic systematic structure had an impact on program effectiveness. Researchers studying credit recovery programs have revealed that a lack of a systematic structure is a cause for program failure (Sparks, 2013). The professional development includes course expectations, grading requirements, and course duration guidelines. With credit recovery programs being implemented within the last two decades, it was difficult to compare graduation requirements of credit recovery programs to the traditional high school graduation requirements. A credit recovery program does not have any formal or standardized requirements for completion, whereas the traditional education system has implemented a remarkable number of requirements that all students must meet. The establishment of a professional development will provide the academic structure that is needed for successful course completions.

Lastly, the insufficient method of curriculum delivery may have impacted program effectiveness. The professional development initiative uses a blended learning model to deliver credit recovery courses. Students needing credit recovery represent a major portion of the high school student population that subsequently dropped out or were late graduating (Picciano et al., 2012). It is imperative that students have the

academic and technological readiness to succeed in credit recovery programs. A blended learning structure would facilitate learning for students who are academically and technologically deficient. Certified teachers would provide a combination of direct instruction and assistance with the online portion of the class. This pedagogical approach would aid in providing students with the confidence to be academically successful in the credit recovery program.

The evaluation of credit recovery programs, using quantitative and qualitative research methods, must be deemed essential for determining its impact on graduation, and promoting positive social change. The current research findings inform practice and guide the continuous improvement efforts of the credit recovery programs. Without the evaluation of credit recovery programs, the potential for closing the graduation gap between Whites and minorities will remain unknown. Moreover, determining the effectiveness of credit recovery programs is crucial to improving the graduation rates of minority males in the United States.

References

Allensworth, E., Michelman, V., Nomi, T., & Heppen, J. (2014). Effects of expanding summer credit recovery in algebra. *Society for Research on Educational Effectiveness*. Retrieved from ERIC database (ED562706).

American Youth Policy Forum. (2014). *Expanding a successful reform for increasing graduation rates.* Retrieved from http://www.aypf.org/resources/expanding-a-successful-reform-for-increasing-graduation-rates-the-continuing-story-of-cunys-accelerated-study-in-associate-programs-asap/

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. New York, NY: Longman.

Balfanz, R., Bridgeland, J. M., Bruce, M., & Fox, J. H. (2012). Building a grad nation: Progress and challenge in ending the high school dropout epidemic. Annual Update, 2012. *Civic Enterprises*. Retrieved from http://www.civicenterprises.net/MediaLibrary/Docs/building_a_grad_nation. pdf

Bedi, A. (2004). An andragogical approach to teaching styles. *Education for Primary Care*, *15*(1), 93-97. Retrieved from http://insights.ovid.com/education-primary-care/edupc/2004/02/000/andragogical-approach-teaching-styles/12/00146966

Berg, N., & Nelson, T. D. (2016). Pregnancy and dropout: Effects of family, neighborhood, and high school characteristics on girls' fertility and dropout status. *Population Research and Policy Review*, *35*(6), 757-789. doi:10.1007/s11113-016-9410-4

Betts, J. R., Zau, A. C. & Bachofer, K. V. (2013). College readiness as a graduation requirement: An assessment of San Diego's challenges. *Public Policy Institute of California*. Retrieved from http://www.ppic.org//content/pubs/report/R_413JBR.pdf

Blount, T. (2012). Dropout prevention: Recommendations for counselors. *Journal of School Counselors, 10*(16), 1-33. Retrieved from http://files.eric.ed.gov/fulltext/EJ981196.pdf

Bowers, A. J., Sprott, R., & Taff, S. A. (2013). Do we know who will drop out? A review of the predictors of dropping out of high school: Precision, sensitivity, and specificity. *High School Journal*, *96*(2), 77-100. doi:10.1353/hsj.2013.0000

Boyd, J. T. (2015). *Online credit recovery as an effective intervention for American students at risk of dropping out of high school* (Doctoral dissertation, Virginia Polytechnic Institute and State University).

Bragg, D. D., & Taylor, J. L. (2014). Toward college and career readiness: How different models produce similar short-term outcomes. *American Behavioral Scientist*, *58*(8), 994-1017. doi:10.1177/0002764213515231

Brown, D. (2012). Rural districts bolster choices with online learning. *Learning & Leading with Technology, 39*(6), 12-17. Retrieved from http://files.eric.ed.gov/fulltext/EJ982834.pdf

Cabus, S. J., & De Witte, K. (2016). Why do students leave education early? Theory and evidence on high school dropout rates. *Journal of Forecasting*, *35*(8), 690-702. doi:10.1002/for.2394

Cardak, B. A., & Vecci, J. (2015). Graduates, dropouts and slow finishers: The effects of credit constraints on university outcomes. *Oxford Bulletin of Economics and Statistics*, *78*(3), 323–346. doi:10.1111/obes.12119

Carr, S. (2014). Credit recover hits the mainstream. *Education Next*, *14*(3), 30-37. Retrieved from https://eric.ed.gov/?id=EJ1033672

Child Trends. (2014). *Making the grade: Assessing the evidence for integrated student supports*. Retrieved from https://www.childtrends.org/wp-content/uploads/2014/02/2014-07ISSPaper.pdf

Chingos, M. M. (2013). Questioning the quality of virtual schools. *Education Next*, *13*(2). Retrieved from http://search.proquest.com/openview/04ca98011f8f9f214a97cdee7242b112/1?pq-origsite=gscholar&cbl=1766362

Circle. (2012). *Young voters in the 2012 presidential election: The educational gap remains.* Retrieved from http://www.civicyouth.org/wp-content/uploads/2012/11/2012-Exit-Poll-by-Ed-Attainment-Final. pdf

Clements, M. Stafford, E., Pazzaglia, A. M. & Jacobs, P. (2015). *Online course use in Iowa and Wisconsin public high schools: The results of two statewide surveys* (REL 2015–065), Washington, D.C.: U. S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest.

Council on Foreign Relations. (2012). *U.S. education reform and national security.* Retrieved from http://www.cfr.org/united-states/us-education-reform-national-security/p27618

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Boston, MA: Pearson.

Cullen, J. B., Levitt, S. D., Robertson, E., & Sadoff, S. (2013). What can be done to improve struggling high schools? *Journal of Economic Perspectives, 27*(2), 133-52. doi:10.1257/jep.27.2.133

Davenport, J. (1987). Is there a way out of the andragogy morass? *Culture and Processes of Adult Learning, 11*(3), 152-159.

DePaoli, J., Fox, J., Ingram, E., Maushard, M., Bridgeland, J., & Balfanz, R. (2015). *Building a grad nation: Progress and challenge in ending the high school dropout epidemic—2015 annual update.* Retrieved from http://gradnation. org/sites/default/files/18006_CE_BGN_Full_vFNL. pdf

Dervin, F., & Gross, Z. (2016). *Intercultural competence in education: Alternative approaches for different times*. London, UK: Palgrave Macmillan. doi:10.1057/978-1-137-58733-6

District of Columbia Public Schools (DCPS). (2015). *DCPS Secondary School grading and reporting policy*. Retrieved from https://dcps.dc. gov/sites/default/files/dc/sites/dcps/publication/attachments/DCPS%20Grading%20and%20Reporting%20Policy-Final%20070615.pdf

Duckworth, A. L., Quinn, P. D., & Tsukayama, E. (2012). What No Child Left Behind leaves behind: The roles of IQ and self-control in predicting standardized achievement test scores and report card grades. *Journal of Educational Psychology, 104*(2), 439-51. doi:10.1037/a0026280

Duffey, D., & Fox, C. (2012). *National educational technology trends 2012.* Washington, D.C.: State Educational Technology Directors Association (SETDA). Retrieved from http://www.setda.org/wp-content/uploads/2013/12/SETDANational_Trends_2012_June20_Final. pdf

Dwyer, R. E., McCloud, L., & Hodson, R. (2012). Debt and graduation from American universities. *Social Forces, 90*(4), 1133-1155. doi:10.1093/sf/sos072

Eno, J., & Heppen, J. (2014). Targeting summer credit recovery. *Society for Research on Educational Effectiveness*. Retrieved from http://eric.ed. gov/?id=ED562833

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, *41*(4), 1149-1160. doi:10.3758/BRM.41.4.1149

Fetsco, T. G., Donnelly, S. & Tang, W. (2016). Credit recovery programs: Recommendations for effective implementation. *Research in Practice*, 4(2). Retrieved from https://nau.edu/uploadedFiles/Academic/COE/Gear_Up/_Forms/Research%20in%20Practice%20Credit%20Recovery.pdf

Field, A. (2005). *Discovering statistics using SPSS* (4th ed.). London, UK: SAGE.

Figlio, D., & Loeb, S. (2011). School accountability. *Handbook of the Economics of Education*, *3*, 383-421. doi:10.1016/S0169-7218(11) 03008-5

Fort Worth Independent School District (FWSD). (2016). *A guide to grade reporting: Secondary schools grades 6-12*. Retrieved from https://www.fwisd.org/cms/lib/TX01918778/Centricity/Domain/2144/Secondary%20GTGR.pdf

Franco, M. S., & Patel, N. H. (2009). An interim report on a pilot credit recovery program in a large suburban Midwestern high school. *Education*, *132*(1). Retrieved from https://www.questia.com/library/journal/1G1-269228795/an-interim-report-on-a-pilot-credit-recovery-program

Freeman, J., & Simonsen, B. (2014). Examining the impact of policy and practice interventions on high school dropout and school completion rates: A systematic review of the literature. *Review of Educational Research*, *85*(2), 205–248. doi:10.3102/0034654314554431

Gajewski, A. & Mather, M. (2015). Remediation strategies for learners at risk of failure: A course-based retention model. *College Quarterly*, 18(1). Retrieved from http://files.eric.ed.gov/fulltext/EJ1070015.pdf

Geiser, S., & Santelices, V. (2004). *The role of Advanced Placement and honors courses in college admissions.* Berkeley, CA: University of California, Berkeley.

Genao, S. (2014). Measuring the effectiveness of an alternative education collaboration: Newark, New Jersey. *International Journal of Educational Management, 28*(4), 432-450. doi:10.1108/IJEM-01-2013-0011

Gurung, B., & Rutledge, D. (2014). Digital learners and the overlapping of their personal and educational digital engagement. *Computers & Education*, *77*(1), 91–100. doi:10.1016/j.compedu.2014.04.012

Hansen, J., Sadler, P. M. & Sonnert, G. (2017). *Estimating high school GPA weighting parameters with a graded response model*. Retrieved from https://pdfs. semanticscholar.org/bbc8/6d434fa918f1fecdd939ec553cc36486978d.pdf

Hemmer, L. & Shepperson, T. (2014). A cross case state analysis of alternative education accountability policy. *International Journal of Organizational Behavior in Education*, 2(1). Retrieved from http://www.nationalforum.com/Electronic%20Journal%20Volumes/Hemmer,%20Lynn%20A%20Cross%20Case%20State%20Analysis%20IJOBE%20V2%20N1%202014.pdf

Heppen, J. (2015). Panel paper: The struggle to pass algebra in urban high schools: Does early credit recovery help students get back on track? *Association for Public Policy Analysis and Management*. Retrieved from https://appam.confex.com/appam/2015/webprogram/Paper14421.html

Heppen, J., Jones, W., Faria, A., Sawyer, K., Lewis, S., Horwitz, A., . . . & Casserly, M. (2012). *Using data to improve instruction in the Great City Schools: Documenting current practice.* Retrieved from http://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/87/Strand%202%20Report%20-%20Documenting%20Current%20Practice.pdf

Hiss, W. C., & Franks, V. W. (2014). *Defining promise: Optional standardized testing policies in American college and university admissions.* Presented at IACAC Conference. Itasca, IL, May 2, 2014.

Hoffman, L. (2012, September). *Free and reduced-price lunch eligibility data in EDFacts: A white paper on current status and potential changes*. Fairfax, VA: Quality Information Partners.

Houde, J. (2006). *Andragogy and motivation: An examination of the principles of andragogy through two motivation theories* (Online submission). Retrieved from http://eric.ed.gov/?id=ED492652

Hughes, J., Zhou, C., & Petscher, Y. (2015). *Comparing success rates for general and credit recovery courses online and face to face: Results for Florida high school courses (REL 2015–095).* Washington, D.C.: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southeast.

Hupfeld, K. (2007). Resiliency skills and dropout prevention: A review of the literature. *Denver: Scholar Centric*. Retrieved from http://absentismo. consejoescolardecanarias.org/wp-content/uploads/download-manager-files/Resiliency Skill and Dropout Prevention.pdf

Iachini, A. L., Buettner, C., Anderson-Butcher, D., & Reno, R. (2013). Exploring students' perceptions of academic disengagement and reengagement in a dropout recovery charter school setting. *Children & Schools, 35*(2), 113-20. Retrieved from https://academic.oup.com/cs

Intercultural Development Research Association (IDRA). (2014) *College bound and ready*. Retrieved from http://files.eric.ed.gov/fulltext/ED560193.pdf

Izumi, M., Shen, J., & Xia, J. (2013). Determinants of graduation rate of public alternative schools. *Education and Urban Society.* Retrieved from http://journals.sagepub.com/home/eus

Jacob, B. (2017). The changing federal role in school accountability. *Journal of Policy Analysis and Management*, *36*(2), 469-477. doi:10.1002/pam.21975

John, H., Chengfu, Z., & Yaacov, P. (2015). Comparing success rates for general and credit recovery courses online and face to face: Results for Florida High school courses. REL 2015-095. *Regional Educational Laboratory Southeast*. Retrieved from http://eric.ed.gov/?id=ED559978

Johnson, H. (2013). *Research into practice: Credit recovery*. Retrieved from http://oregongearup.org/sites/oregongearup. org/files/research-briefs/creditrecovery.pdf

Joo, M.., & Kim, J. (2014). National high school graduation rate: Are recent birth cohorts taking more time to graduate? *Education and Urban Society, 48*(2), 126-50. doi:10.1177/0013124514529328

Jordan, J. L., Kostandini, G., & Mykerezi, E. (2012). Rural and urban high school dropout rates: Are they different? *Journal of Research in Rural Education, 27*(12), 1-21. Retrieved from http://jrre.psu.edu/articles/27-12.pdf

Katz, M. H. (2006). *Assumptions of multiple linear regression, multiple logistic regression, and proportional hazards analysis* (pp. 38-67). Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9780511811692.006

Kennelly, L., & Monrad, M. (2007). Approaches to dropout prevention: Heeding early warning signs with appropriate interventions. *American Institutes for Research*. Retrieved from http://files.eric.ed.gov/fulltext/ED499009.pdf

Kim, K. J., & Frick, T. W. (2011). Changes in student motivation during online learning. *Journal of Educational Computing Research*, *44*(1), 1-23. doi:10.2190/ec.44.1.a

Knowles, M. S. (1970). *The modern practice of adult education: From pedagogy to andragogy*. New York, NY: Cambridge Books. Retrieved from http://www.umsl.edu/~henschkej/articles/a_The_%20Modern_Practice_of_Adult_Education.pdf

Knowles, M. S. (1984). *The adult learner* (3rd ed.). Houston, TX: Gulf. Retrieved from http://files.eric.ed.gov/fulltext/ED084368.pdf

Kronholz, J. (2011). Getting at-risk teens to graduation: Blended learning offers a second chance. *Education Next, 11*(4), 24. Retrieved from http://search.proquest.com/openview/9716236d1da27be73ff3479852c7730f/1?pq-origsite=gscholar&cbl=1766362

Lagana-Riordan, C., Aguilar, J. P., Franklin, C., Streeter, C. L., Kim, J. S., Tripodi, S. J., & Hopson, L. M. (2011). At-risk students' perceptions of traditional schools and a solution-focused public alternative school. *Preventing School Failure*, *55*(3), 105-114. doi:10.1080/10459880903472843

Lewis, S., Whiteside, A., & Dikkers, A. (2014). Autonomy and responsibility: Online learning as a solution for at-risk high school students. *International Journal of E-Learning & Distance Education, 29*(2), 1-11. Retrieved from http://ijede.ca/index.php/jde/article/view/883/1543

Leys, C., Ley, C., Klein, O., Bernard, P., & Licata, L. (2013). Detecting outliers: Do not use standard deviation around the mean, use absolute deviation around the median. *Journal of Experimental Social Psychology*, *49*(4), 764-766. doi:10.1016/j.jesp.2013.03.013

Lockett, C., Cornelious, L., & Gray, K. (2015). Factors contributing to secondary school dropouts in an urban school district. *Research in Higher Education Journal, 29*(2), 1-15. Retrieved from http://www.aabri. com/manuscripts/152331.pdf

Marshall, J. H.., Aguilar, C. R., Alas, M., Castellanos, R. R., Castro, L., Enamorado, R., & Fonseca, E. (2014). Alternative education programmes and middle school dropout in Honduras. *International Review of Education*, *60*(1), 51-77. doi:10.1007/s11159-014-9409-1

Martinez, R. R.., Baker, S. B., & Young, T. (2017). Promoting career and college readiness, aspirations, and self□efficacy: Curriculum field test. *The Career Development Quarterly*, *65*(2), 173-188. doi:10.1002/cdq.12090

McCabe, J., & St. Andrie, R. (2012). Credit recovery programs: Full report. *Center for Public Education*. Retrieved from http://www.centerforpubliceducation. org/Main-Menu/Staffingstudents/Credit-recovery-programs/Credit-recovery-programs-full-report.html

Means, B., Wang, H., Young, V., Peters, V. L., & Lynch, S. J. (2016). STEM□focused high schools as a strategy for enhancing readiness for postsecondary STEM programs. *Journal of Research in Science Teaching*, *53*(5), 709-736. doi:10.1002/tea.21313

Merriam, S. B., & Caffarella, R. S. (1999). *Learning in adulthood: A comprehensive guide.* San Francisco, CA: Jossey-Bass.

Michigan's Center for Educational Performance and Information. (2014).

Graduation/dropout snap shot, 4- year graduation cohort race/ethnicity/all students. Retrieved from https://www.mischooldata.org/DistrictSchoolProfiles/StudentInformation/GraduationDropoutRate2.aspx

Michigan Department of Education (MDE). (2016). *Alternative education.* Retrieved from https://www. michigan.gov/mde/0,4615,7-140-28753_65799_40027---,00.html

Mileaf, M., Paul, A., Rukobo, E., & Zyko, A. (2012). *Credit recovery: Informational brief: A look at credit recovery programs across the United States.* New York, NY: New York Comprehensive Center.

National Center for Education Statistics (NCES). (2015). *U.S. high school graduation rate hits new record high.* Retrieved from http://www.ed.gov/news/press-releases/achievement-gap-narrows-high-schoolgraduation-rates-minority-students-improve faster-rest-nation.

National Dropout Prevention Center. (2013). *Why students drop out.* Retrieved from http://dropoutprevention.org/resources/statistics/quick-facts/why-students-drop-out/

National Education Association (NEA). (2016). *Understanding the gaps: Who are we leaving behind—and how far*? Retrieved from www.nea.org/assets/docs/18021Closing_Achve_Gap_backgrndr_7-FINAL.pdf

North Carolina Public Schools (NCPS). (2015). *Credit recovery in North Carolina*: *Frequently asked questions*. Retrieved from http://www.ncpublicschools.org/docs/accountability/testing/eoc/creditrecovfaq14.pdf

Office of Management and Budget. (1997). *Revisions to the standards for the classification of federal data on race and ethnicity*. Retrieved from https://obamawhitehouse.archives.gov/omb/fedreg_1997standards

Oliver, K., & Kellogg, S. (2015). Credit recovery in a virtual school: Affordances of online learning for the at-risk student. *Journal of Online Learning Research*, *1*(2), 191-218. Retrieved from https://www.learntechlib.org/d/149111

Ozuah, P. O. (2005). First, there was pedagogy and then came andragogy. *Einstein Journal of Biology & Medicine*, *21*(2), 83-87. Retrieved from http://ojs.library. einstein.yu.edu/index.php/EJBM/article/download/90/90

Palardy, G. J. (2013). High school socioeconomic segregation and student attainment. *American Educational Research Journal*, *50*(4), 714–754. doi:10.3102/0002831213481240

Perrenoud, M. R. (2010). *Credit recovery (CR) solutions offered in after school programs*: *BlairLEARNs—Pasadena Unified School District.* Retrieved from http://www.afterschoolnetwork. org/sites/main/files/file-attachments/credit_recovery_booklet.pdf

Pettyjohn, T., & LaFrance, J. (2014). Online credit recovery: Benefits and challenges. *Education Leadership Review of Doctoral Research*, *1*(1), 204-219. Retrieved from http://files.eric.ed.gov/fulltext/EJ1105728.pdf

Picciano, A. G., Seaman, J., & Day, S. (2011). *Online learning in Illinois high schools: Has the Time Come?* Babson Park, MA: Babson Survey Research Group.

Picciano, A. G., Seaman, J., Shea, P., & Swan, K. (2012). Examining the extent and nature of online learning in American K-12 education: The research initiatives of the Alfred P. Sloan Foundation. *The Internet and Higher Education*, *15*(2), 127-135. doi:10.1016/j.iheduc.2011.07.004

Pleis, J. R., Lucas, J. W., & Ward, B. W. (2010). *Summary health statistics for the U.S. adults: National Health Interview Survey, 2009, Vital and Health Statistics Series 10, no. 249.* Washington, D.C: National Center for Health Statistics. Retrieved from http://www. cdc.gov/nchs/data/series/sr_10/sr10_249.pdf

Pratt, D. D. (1993). Andragogy after twenty-five years. *New Directions for Adult and Continuing Education*, *1993*(57), 15-23. doi:10.1002/ace.36719935704

Queen, B., Lewis, L., & Coopersmith, J. (2011). *Distance education courses for public elementary and secondary school students: 2009-10* (NCES 2012-008). Washington, D.C.: National Center for Education Statistics. Retrieved from https://nces.ed.gov/pubs2012/2012008.pdf

Rachal, J. R. (2002). Andragogy's detectives: A critique of the present and a proposal for the future. *Adult Education Quarterly*, *52*(3), 210-227. Retrieved from http://www.umsl. edu/~henschkej/henschke/more%20henschke_5_11_04/Andragogy's%20detectives_a_critique_of_the_present_and_a_proposal_for_the_future.pdf

Rachal, J. R. (1994). *Andragogical and pedagogical methods compared: A review of the experimental literature.* Retrieved from http://files.eric.ed.gov/fulltext/ED380566.pdf

Rahbari, M., Hajnaghizadeh, F., Damari, B., & Adhami, B. (2014). Dropouts and social determinants of health: Policy for the prevention of school dropout, qualitative study of the causes and interventions. *International Journal of Preventive Medicine*, *5*(11), 1396-1404.

Rennie Center for Education Research & Policy (RCERP). (2014). *Alternative education: Exploring innovations in learning.* Retrieved from http://www.renniecenter. org/sites/default/files/2017-02/AlternativeEducation%20-%20Exploring%20Innovations%20in%20Learning_0. pdf

Rumberger, R. W. (2011). *Dropping out*: *Why students drop out of high school and what can be done about it.* Cambridge, MA: Harvard University Press.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68. doi:10.1037/0003-066X.55.1.68

Ryan, R. M., Curren, R. R., & Deci, E. L. (2013). What humans need: Flourishing in Aristotelian philosophy and self-determination theory. In A. S. Waterman (Eds.), *The best within us: Positive psychology perspectives on eudaimonia* (pp. 57-75). Washington, D.C.: American Psychological Association. doi:10.1037/14092-004 doi:10.1037/114092-004

Samaroo, S., Cooper, E., & Green, T. (2013). Pedandragogy: A way forward to self-engaged learning. *New Horizons in Adult Education and Human Resource Development*, *25*(3), 76-90. doi:10.1002/nha3.20032

Sanders, M. G., & Jordan, W. J. (Eds.). (2013). *Schooling students placed at risk: Research, policy, and practice in the education of poor and minority adolescents*. New York, NY: Routledge.

Saupe, J. L. & Eimers, M. T. (2013). Alternative estimates of the reliability of college grade point averages. *Association for Institutional Research*, *130*(1)*,* 13-21. Retrieved from http://files.eric.ed.gov/fulltext/ED573086.pdf

Schunk, D. H., & Zimmerman, B. J. (2008). *Motivation and self-regulated learning: Theory, research and applications*. New York, NY: Lawrence Erlbaum Associates.

Sha, L., Looi, C. K., Chen, W. & Zhang, B. H. (2012). Understanding mobile learning from the perspective of self-regulated learning. *Journal of Computer Assisted Learning*, *28*(4), 366-378. doi:10.1111/j.1365-2729.2011.00461.x

Sharp, J. C. (2013). *Summer credit recovery and middle grade students*. (Doctoral dissertation, East Tennessee State University, 2013). Retrieved from http://dc. etsu.edu/etd/2272

Simon, M. K., & Goes, J. (2013). *Ex-post-facto research: Using existing data for your dissertation research*. Retrieved from http://www. dissertationrecipes.com/ex-post-facto-research/

Simonsen, B., & Sugai, G. (2013). PBIS in alternative education settings: Positive support for youth with high-risk behavior. *Education and Treatment of Children, 36*, 3-14. Retrieved from http://www.educationandtreatmentofchildren.net/

Slaten, C. D., Irby, D. J., Tate, K. & Rivera, R. (2015). Towards a critically conscious approach to social and emotional learning in urban alternative education: School staff members' perspectives. *Journal for Social Action in Counseling and Psychology*, *7*(1), 41-62. Retrieved from http://www.psysr.org/jsacp/slaten-v7n1-2015_41-62.pdf

Smith, A., & Thompson, M. (2014). Alternative education programmes: Synthesis and psychological perspectives. *Educational Psychology in Practice, 30*(2), 111-119. doi:10.1080/02667363.2014.891101

Spain, A., & McMahon, K. (2016). More than just test scores: Leading for improvement with an alternative community-driven accountability metric. *Journal of Cases in Educational Leadership*, *19*(2), 21-30. doi:10.1177/1555458915626761

Sparks, S. (2013). A "neglected" population gets another chance at a diploma. *Education Week*, *32*(34), 3-4.

Spitler, C., Repetto, J., & Cavanaugh, C. (2013). Investigation of a special education program in a public cyber charter school. *American Journal of Distance Education*, *27*(1), 4–15. doi:10.1080/08923647.2013.754182

Stark, P., & Noel, A. M. (2015). *Trends in high school dropout and completion rates in the United States:1972–2012 (NCES 2015- 015).* Washington, D.C.: National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubsearch

Subedi, B. R.., Reese, N. & Powell, R. (2015). Measuring teacher effectiveness through hierarchical linear models: Exploring predictors of student achievement and truancy. *Journal of Education and Training Studies*, *3*(2), 34-43. doi:10.11114/jets.v3i2.666

Swain-Bradway, J., Swoszowski, N. C., Boden, L. J. & Sprague, J. R. (2013). Voices from the field: Stakeholder perspectives on PBIS implementation in alternative education settings. *Education and Treatment of Children*, *36*(3), 31-46. Retrieved from https://pdfs.semanticscholar.org/0223/c1bc0d014e76c72c417f0773 0d7ba0d6e77c.pdf#page=37

Tavakolian, H. R., & Howell, N. (2012). Dropout dilemma and interventions. *Global Education Journal*, (1), 77-81. Retrieved from http://www.franklinpublishing.net/globaleducation.html

Taylor, G., Lekes, N., Gagnon, H., Kwan, L., & Koestner, R. (2012). Need satisfaction, work-school interference and school dropout: An application of self-determination theory. *British Journal of Educational Psychology*, *82*(4), 622-646. doi:10.1111/j. 2044-8279.2011.02050.x

The Statistics Portal. (n.d.). *Unemployment rate of high school graduates and dropouts not enrolled in school in the United States from 2000–2013.* Retrieved from http://www. statista. com/statistics/184996/unemployment-rate-of-high-school-graduates-and-dropouts/

Tsang, A., & Harris, D. M. (2016). Faculty and second-year medical student perceptions of active learning in an integrated curriculum. *Advances in Physiology Education*, *40*(4), 446-453. doi10.1152/advan.00079.2016

United States Census Bureau. (2012). *Statistical abstract of the United States: 2012.* Retrieved from http://www.census.gov/compendia/statab/2012/tables/ 12s0232.pdf

United Stated Department of Education. (2001). *No child left behind act of 2001*. Retrieved from http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf

United States Department of Education. (2015). *ESEA flexibility request.* Retrieved from http://www.michigan. gov/documents/mde/MI_ESEA_Flex_Request_ Renewal_Response_7.28. 15_497051_7.pdf

United States Department of Education, Institute of Education Sciences. (2015). *Dropout Prevention intervention report: Credit recovery programs*. Retrieved from http://whatworks.ed.gov

Vogt, W. P., & Burke Johnson, R. (2011). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences* (4th ed.). Thousand Oaks, CA: SAGE.

Volkerding, R. L. (2012). Do at-risk students benefit when NovaNET is used for credit recovery? Retrieved from http://eric.ed.gov/?id=ED548074

Willard, J. A., Bayes, B. & Martinez, J. (2015). *Gateway to college: Lessons from implementing a rigorous academic program for at-risk young people*. New York, NY: MDRC.

Wolff, L. L. (2014). Course credit recovered. *The Education Digest*, *79*(8), 55–59.

Xu, D., & Jaggars, S. S. (2013). Adaptability to online learning: Differences across types of students and academic subject areas. CCRC Working Paper No. 54. *Community College Research Center, Columbia University*. Retrieved from http://eric.ed.gov/?id=ED539911

Zinth, J. D. (2011). Credit recovery and proficiency-based credit: Maintaining high expectations while providing flexibility. *Education Commission of the States (NJ3)*. Retrieved from http://files.eric.ed.gov/fulltext/ED521327.pdf

Zweig, J. S. & Stafford, E. T. (2016). Training for online teachers to support student success: Themes from a survey administered to teachers in four online learning programs. *Journal of Online Learning Research*, *2*(4), 399-418. Retrieved from https://www.learntechlib.org/d/172573

Appendix A: Professional Development Recommendation

Professional Development Training Plan

The implementation of the professional development plan will require a series of meetings with school management and other key stakeholders. Additionally, the development of the professional development plan will require ongoing professional development training for the members of the various committee members, employment of additional staff, technological costs, and training-related expenses. The professional development plan for the Blended Learning, Data Management, Enrollment and Course Placement, and Program Evaluation committees will support the implementation of a new credit recovery program. These committee members will take ownership for providing the expertise required to develop, implement, and evaluate the credit recovery program. The implementation plan for the credit recovery program will occur over a three-year period. The first year of the implementation will offer English and math courses. The following year, the addition of science and social studies will be added to the credit recovery course offerings. The third year, will represent full implementation, as the course offerings of English, math, science, and social studies will be available to students. The third year, will also represent the successful completion of the goals used to develop and implement the new credit recovery program. The project timelines for the presentation of findings, the three- day professional development training schedule, and the job embedded and ongoing training for the professional development committees, are included in this section.

Presentation of Findings

Project Timeline

October 2018

Week: One (1)

Purpose: To present research outcomes, and to obtain approval to implement project

Participants: Superintendent, Chair of Management Company, and Executive Director of Parent Organization

Evaluation: Five question survey regarding the purpose, goals, and clarifying questions of the study

Week: Two (2)

Purpose: To present research outcomes, and to survey audience for participation in the following committees: Blended Learning, Data Management, Enrollment and Course Placement, and Program Evaluation

Participants: Success Academies' Authorization Team, Board of Directors, and Principals

Evaluation: Five question survey regarding the purpose, goals, and clarifying questions of the study

Week: Three (3)

Purpose: To present research outcomes, and to survey audience for participation in one of the following committees: Blended Learning, Data Management, Credit Recovery Course Design, Enrollment and Course Placement, and Program Evaluation

Participants: Teachers, staff, technology vendor, online courseware vendor, students, parents, and other community stakeholders

Evaluation: Five question survey regarding the purpose, goals, and clarifying questions of the study

Professional Development

Three-day Agenda

Participants: Teachers, literacy and math coaches, principal, parents, and community stakeholders.

Purpose: To provide a three-day professional development training to administrators, teachers, counselors, support staff, and pupil accounting staff regarding the development of a new credit recovery program.

Outcomes: The Blended Learning, Enrollment and Course Placement, Data Management, and the Program Evaluation committees will develop various components of the credit recovery program that will support the curricular structure of the program, provide a data accountability system, and a plan to evaluate program effectiveness.

Evaluation: Pre-and-post survey questions, and a five-question survey.

Day One (1)	
Time	Activities
8:00am-8:15am	Breakfast, Meet, Sign In
8:20am-8:30am	Anonymous Pre-test: four multiple test questions pertaining to: Credit Recovery, Procedures for identifying credit recovery courses on the students' transcripts, and Blended Learning
8:35am-9:35am	Brief overview of study results, discussions, questions, and clarification of results
9:40am-11:30am	Defining credit recovery and its purpose, group activity, and discussion responses
11:45am-12:30pm	Lunch
12:30pm-1:45pm	Discussion and group activity: procedures for identifying credit recovery courses on students' transcripts
1:45pm-3:00pm	Discussion and group activity: comparison of current model with the six models, determine maintaining the current model or adopt a new one
3:00pm-4:10pm	Defining and describing a blended learning program for credit recovery that is appropriate for the student population
4:10pm-4:30pm	Wrap Up: Anonymous Post-test: four multiple test questions pertaining to: Blended learning curricula Enrollment and course placement procedures Data tracking systems; Evaluation: five question survey

Day Two (2)	
Time	Activities
8:00am-8:15am	Breakfast, Meet, Sign In
8:20am-8:30am	Anonymous Pre-test: four multiple choice questions pertaining to: Blended Learning Curricula, Enrollment and Course Placement Procedures, and Data Tracking Systems
8:30am-8:45am	Recap of previous day's training, audience participation
8:45am-10:00am	Discussion of current blended learning curricula, options for improvement
10:00am-11:30am	Discussion and group activity: determine mastery for course completion, course duration, pre- and post-testing procedures, grading requirements, procedures for documenting credit recovery courses on transcripts
11:35am-12:10pm	Lunch
12:15pm-2:00pm	Discussion regarding the importance of enrollment and course placement procedures in a credit recovery program; group activity: reviewing the current enrollment and placement procedures, recommendations for improvements
2:30pm-4:00pm	Discussion regarding the importance of a data tracking system in a credit recovery program; group activity: reviewing the current data tracking, recommendations for improvement
4:00pm-4:30pm	Wrap Up: Anonymous Post-test: four multiple test questions pertaining to: Blended learning curricula Enrollment and course placement procedures Data tracking systems; Evaluation: five question survey

Day Three (3)	
Time	Activities
8:00am-8:15am	Breakfast, Meet, Sign In
8:20am-8:30am	Anonymous Pre-test: Anonymous Pre-test: eight multiple test questions pertaining to: Credit Recovery, procedures for identifying credit recovery courses on the student's transcripts, Blended Learning, Blended Learning Curricula, Enrollment and Course Placement Procedures, and Data Tracking Systems
8:30am-8:45am	Recap of the two previous day's training sessions, audience participation
8:45am-9:15am	Explanation and Voluntary Sign up for the four Committees: Blended Learning, Enrollment and Course Placement, Data Management, and Program Evaluation
9:15am-10:45am	Blended Learning Committee: Discussion and Group activity, discussion to determine mastery for course completion, course duration, pre- and post-testing procedures, grading requirements, procedures for documenting credit recovery courses on transcripts
10:45am-12:15pm	Enrollment and Course Placement Committee: Discussion and Group activity, Data Management, Discussion regarding the importance of enrollment and course placement procedures in a credit recovery program, group activity reviewing our current enrollment and placement procedures, and recommendations for improvements
12:20pm-12:55pm	Lunch
1:00pm-2:30pm	Data Management Committee: Discussion and Group activity, regarding the importance of a data tracking system in a credit recovery program, group activity: reviewing the current tracking system, and recommendations for improvement
2:30pm-4:00pm	Program Evaluation: Discussion and Group activity regarding the Michigan Program Evaluation Tool
4:00pm-4:30pm	Anonymous Post-test: eight multiple test questions pertaining to: Credit Recovery, procedures for identifying credit recovery courses on the student's transcripts, Blended Learning, Blended Learning Curricula, Enrollment and Course Placement Procedures, and Data Tracking Systems; Evaluation: five question evaluation

Establishment of Committees

Three-day Professional Development Training

Name of Committee: Blended Learning

Members: Teachers, literacy and math coaches, principals, parents, and community stakeholders

Purpose: To provide teaching and learning support for students who have learning deficits in the areas of reading and math

Outcomes: This committee will implement a Direct Instruction component to the credit recovery courses; and develop a curriculum for the credit recovery courses

Name of Committee: Data Management

Members: data specialists, school secretaries, counselors, principal, and community stakeholders

Purpose: To develop systems for disaggregating data, and documentation of credit recovery courses on transcripts

Outcomes: This committee will develop a method for tracking and disaggregating course data; and design the credit recovery descriptors and the grading criteria that will be documented on the students' transcripts

Name of Committee: Enrollment and Course Placement

Members: data specialists, school secretaries, counselors, principal, and community stakeholders

Purpose: To develop enrollment procedures for the credit recovery courses

Outcomes: Development of enrollment, and course placement procedures for credit recovery courses

Name and Committee: Program Evaluation

Members: teachers, assistant superintendent, data specialists, school secretaries, counselors, principal, and community stakeholders

Purpose: Evaluation of credit recovery policy

Outcomes: Development of program evaluation method to measure effectiveness of credit recovery policy

Professional Development Committees

Training Schedule: 2018/2019 School Years

Committee: Blended Learning

Dates: December 2018, January 2019, and February 2019

Name of Training: Blended Learning

Professional Development: Job-embedded

Location: Intermediate School District

Number of Sessions: 6

State Continuing Education Clock Hours (SCECH): Eligible

Dates: January 2019 and February 2019

Committee: Data Management

Dates: January 2019 and February 2019

Name of Training (s): Pupil Accounting, and Transcript Training

Professional Development: Job-embedded

Location: Intermediate School District

Number of Sessions: 4

State Continuing Education Clock Hours (SCECH): Ineligible

Committee: Enrollment and Course Placement

Dates: January 2019 and February 2019

Name of Training: Enrollment and Course Placement

Professional Development: Job-embedded

Location: Intermediate School District

Number of Sessions: 6

State Continuing Education Clock Hours (SCECH): Eligible

Committee: Program Evaluation

Dates: March 2019, April 2019, and May 2019

Name of Training: Program Evaluation

Professional Development: Job-Embedded

Location: Great State University

Number of Sessions: 6

State Continuing Education Clock Hours (SCECH): Eligible

Appendix B: Online Courseware Rubric

Online Courseware Provider Selection Criteria Rubric

This evaluation is key to ensuring that the teachers have the capacity to use the courseware as their resource to provide high-quality blended learning for all students. It is suggested that each online courseware provider be rated on the extent to which it meets the criteria, with one *(1)* indicating that a course does not meet the criteria and three *(3)* indicating that it does.

To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Researched and/or Evidenced-Based data on program effectiveness	• What Works Clearing House • White Papers; Pilot Studies; Anecdotal stories.	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Compatibility requirements to meet current technology specs and remote access	• Compatible operating systems • Sufficient bandwidth • Courseware can be installed on our servers • Cloud-based • Students can access courses remotely • Compatible with digital devices- phones, tablets.	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Timely adaptability of required changes	Experience with timely adapting the curriculum and	3	2	1		

in state content, standards, and standardized assessments	assessments changes to meet the MDE requirements.					
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Capacity to facilitate English Language Learners	Adequate reading, and writing supports for English Language Learners	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
The courseware architecture permits teacher-directed adaptation, customization, and modification of courses	The course provides a wide variety of options for the instructor to customize the course to meet the students' needs by providing: • Additional assignments • Resources and activities for remediation and enrichments	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
User-friendly access to customize student and teacher performance reports	All data for query reports and date ranges are available to generate reports at the building levels.	3	2	1		

To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
The course provides opportunities for students to elevate their thinking beyond remembering and understanding	The course provides assignments, activities, and assessments for students that promote: • Engagement in higher order thinking • Critical reasoning • Thinking in increasingly complex ways.	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Capacity to facilitate appropriate and timely technological support, customer support, and curriculum support	• Adequate staff availability and timely address of customer concerns • Technological and curriculum support • The method of contact is compatible with the school hours • The method of contact is reasonable • The response time is within one school day • The courseware system has not	3	2	1		

	been hacked or compromised • The appropriate technological safeguards are in place • The test banks are adequate to support rolling enrollments.					
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
The course instruction includes activities that engage students in active learning	The course provides several opportunities for students to be actively engaged in the content that includes meaningful and authentic learning experiences such as: • Collaborative learning groups • Student-led review sessions • Games • Analysis or reactions to videos, discussions • Concept mapping • Analyzing case studies, etc.	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Seat-time fee arrangement rather than per student license fee	Pricing is adequate for alternative education program that serves students ages 16 to 22.	3	2	1		
To what extent	*Considerations*	*Meets*	*Partially*	*Does not*	*Not Enough*	*Comments*

does the courseware provider meet the criteria in this area?		*criteria*	*meets criteria*	*meet criteria*	*Information*	
Technical and applied training for operations of the courseware and ongoing, refresher, advanced level professional development	• Professional development training • Basic Operations • Refresher Training • Advanced-level Training • Ongoing training sessions.	3	2	1		
To what extent does the courseware provider meet the criteria in this area?	*Considerations*	*Meets criteria*	*Partially meets criteria*	*Does not meet criteria*	*Not Enough Information*	*Comments*
Assessments: Diagnostic, Formative, Pre-and-Post Tests	• The appropriate diagnostics of reading and math are available • The diagnostic testing provides a prescriptive program • The modifications are given for each activity, unit, and course • Assessments are provided for "test out" course options • Adequate remedial materials are suitable for adult learners • Student feedback-students can review their progress, immediate responses to questions answered incorrectly and an explanation of why the	3	2	1		

	response was incorrect.					

Note: Adapted from the Southern Regional Educational Board's (2006) Checklist for Evaluating Online Courses

Comments: _____

_____

Online Courseware Provider Reviewer: _____ Date: _____

Employee Signature: _____ Date: _____

Online Courseware Provider (*Please circle one*): **Plato Odysseyware Apex Edmentum**

Evaluation Score

33 – 36 = 92% - 100%
29 – 32 = 81% - 89%
26 – 28 = 72% - 78%
22 – 25 = 61% - 69%

Grading Calculation Scale

36 = 100%	31 = 86%	26 = 72%
35 = 97%	30 = 83%	25 = 69%
34 = 94%	29 = 81%	24 = 67%
33 = 92%	28 = 78%	23 = 64%
32 = 89%	27 = 75%	22 = 61%

Appendix C: Graphs Depicting Normality of Dependent Variable (Histogram and P-P Plots) and Independence of Predicted Values and Their Errors (Scatterplot)

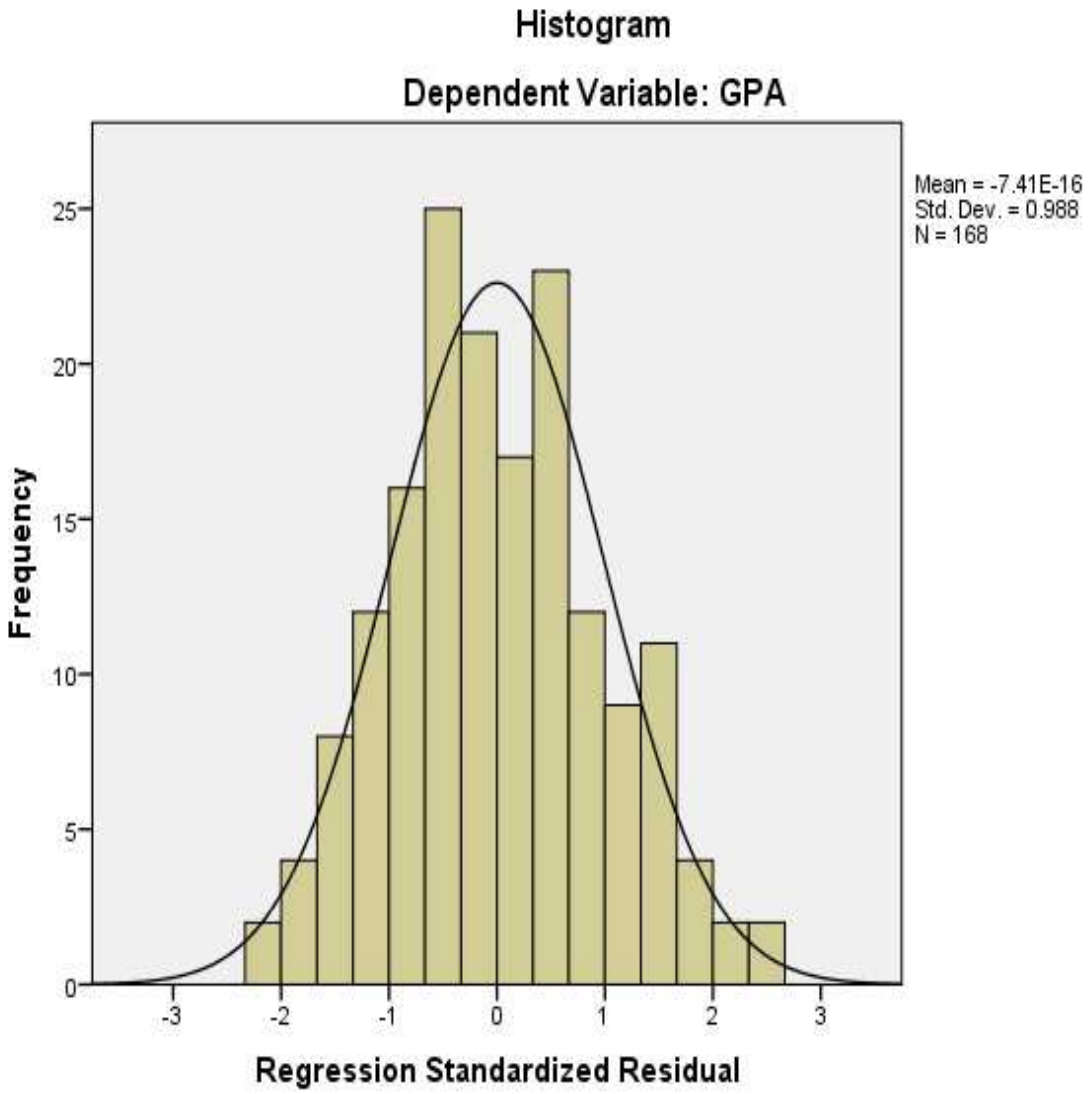

Figure C1. Histogram of the residuals in prediction of GPA.

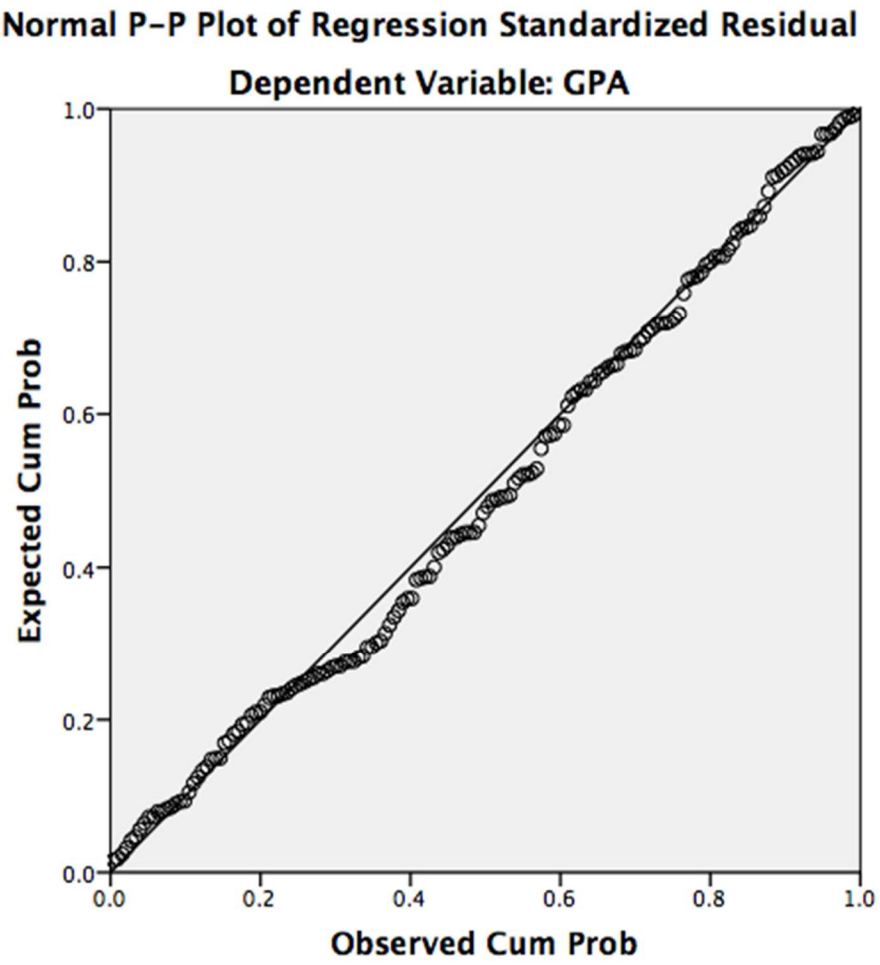

Figure C2. Normal P-P plot of regression standardized residuals.

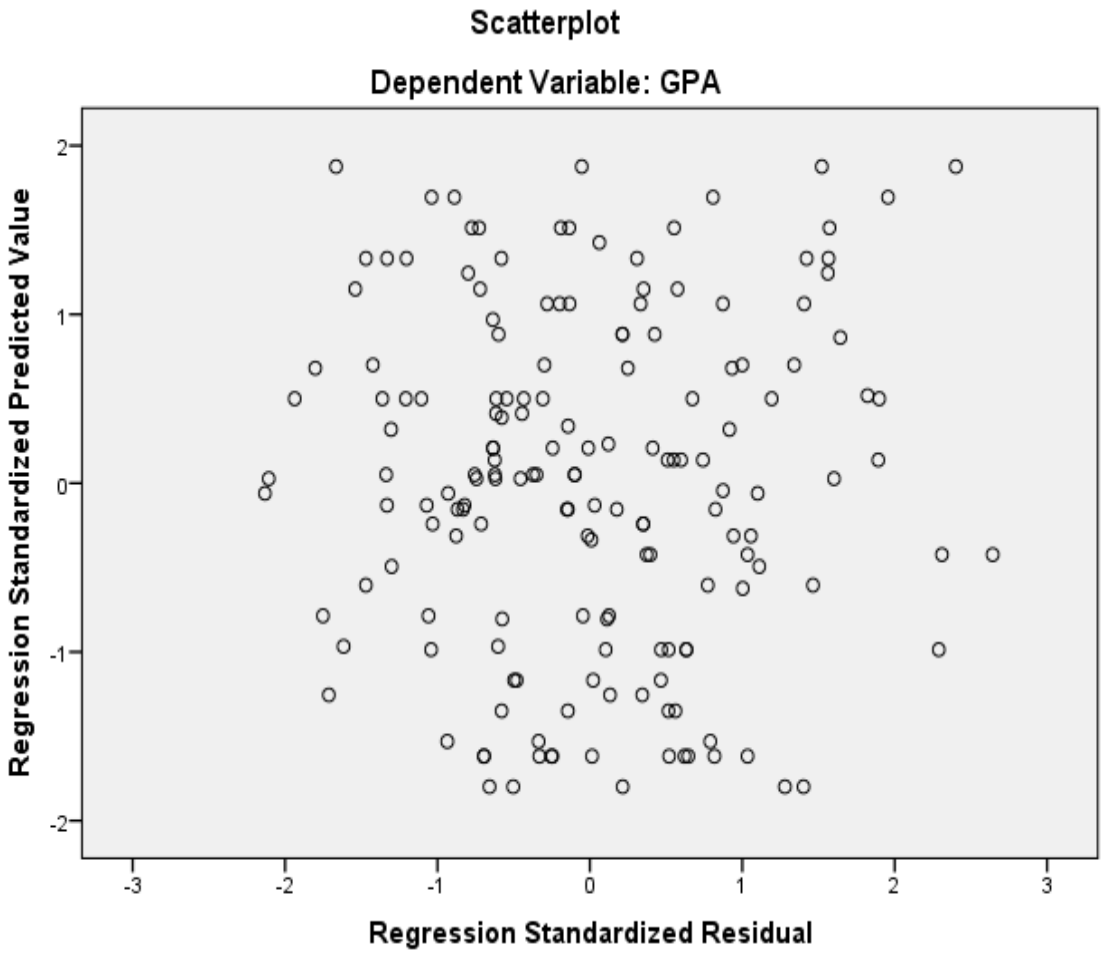

Figure C3. Scatterplot of predicted values and their errors.