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# An Evaluation of an Online High School Summer Credit Recovery Program to Maintain Virginia On-Time Graduation

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# AN EVALUATION OF AN ONLINE HIGH SCHOOL SUMMER CREDIT RECOVERY PROGRAM TO MAINTAIN VIRGINIA ON-TIME GRADUATION

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A Dissertation

Presented to

The Faculty of the School of Education

The College of William & Mary in Virginia

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In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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By

Melissa L. Bentley

March 2019

AN EVALUATION OF AN ONLINE HIGH SCHOOL SUMMER CREDIT RECOVERY ROGRAM TO MAINTAIN VIRGINIA ON-TIME GRADUATION

By

Melissa L. Bentley

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# Dedication

I dedicate this work to my family. Your support and confidence in me have truly made me feel capable, confident and most importantly, loved beyond measure.

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An Evaluation of an Online High School Summer Credit Recovery Program to Maintain Virginia On-Time Graduation


## Abstract

In an attempt to maintain on-time graduation rates and reduce dropout rates, school districts, such as the one in this study, implement credit recovery programs. In an effort to improve student graduation rates and address graduation disparities, the Virginia school district in this study implements a summer credit recovery program that utilizes accelerated online learning as opposed to traditional direct instruction. This study sought to evaluate the effectiveness of the summer program as it relates to the success of student credit recovery and verified credit achievement to determine if there is a correlation to program participation and remaining on-track for on-time graduation. The program evaluation focused on the short term outcomes of the summer online credit recovery program for high school students. The study analyzed four years of post ex facto data. The findings show a relatively high rate of participation of economically disadvantaged, special education, and Black students. The results of this study show that the online credit recovery program is an overall effective instructional method for students in need of recovering failed credits. Results show significant success for students enrolled in English and math courses, a moderate level of success for social studies courses, and a marginal level of success for science courses. There is no correlation between final course grade and accompanying SOL test, and the SOL pass rate was 23%. Ultimately, participation in the summer online credit recovery program proved likely to keep students on-track for on-time graduation.

# AN EVALUATION OF AN ONLINE HIGH SCHOOL SUMMER CREDIT RECOVERY PROGRAM TO MAINTAIN VIRGINIA ON-TIME GRADUATION

# CHAPTER 1

# INTRODUCTION

## Description of the Problem

The National Center for Education Statistics ([NCES], 2016) reports that graduation rates across the country are the highest in history at 81%; however, every 26 seconds one student fails to graduate (Bridgeland, Diluliu, & Burke Morrison, 2006). U.S. school districts struggle with meeting state and federal graduation requirements due to disparities that continue to exist and even widen among various subgroups. Maintaining and improving graduation rates within those subgroups has become a significant focus across public high schools in Virginia. The most recent U.S. Department of Education data for the 2011-2012 school year indicates a 34-point 4-year graduation rate gap for students with disabilities (Samuels, 2014).

The national concern for graduation and dropout rates is documented as an imperative social problem in our society that has roots in the economy and has long-term life consequences. The dire implication of dropping out of high school with few academic skills and credentials significantly limit a person's economic and social advancement throughout the remainder of their working lives (Rumberger, 1987). Dropouts are eight times more likely to be in jail or prison as high school graduates and are more likely to be unemployed, in poor health, living in poverty, on public assistance, or single parents with children who drop out of schools (Bridgeland et al., 2006). Limited job placement, increased substance abuse, increased reliance on government assistance, and

incarceration are common characteristics associated with high school dropouts (Rumberger & Lim, 2008).

**Virginia On-Time Graduation**

In 2006, the Virginia General Assembly approved House Bill 19. It served as a way to assess and report high school graduation rates at the state, district and school level. The formula is based on recommendations from the National Governors Association Task Force on State High School Graduation Data (Virginia Department of Education [VDOE], 2017). Through the executive branch, state governors often act as "issue catalysts" in state policy making by selecting key issues, publicizing them in their speeches, and leading the public and legislature to focus on them (Fowler, 2009, p. 147).

In January 2016, the Council of State Governments released their top five education issues for the year (Stockdale & Whitehouse, 2016), which highlighted the Every Student Succeeds Act (ESSA), the reauthorization of the Elementary and Secondary Education. This bipartisan effort of the U.S. Senate and House strives to give states greater control of accountability and academic standards. During the same month, the Acting U.S. Secretary of Education John King released his goals for 2016, which included improving public high school program completion rates (Klein, 2016). School districts are tasked to keep students on track to graduate with a high school diploma in order to meet federal accountability measures which determine school quality (Elementary and Secondary Education Act [ESEA], 2016; No Child Left Behind [NCLB], 2002.

School districts in Virginia are tasked with meeting state and federal graduation requirements. All Virginia students are expected to graduate with a standard or advanced

diploma. Significantly disabled special education students are assessed alternatively and can graduate with an Applied Studies diploma. The Applied Studies diploma does not have credit or verified credit requirements. Students on this diploma work to achieve individual goals on their Individual Education Plan, often related to functional living skills. The Modified Standard state diploma which required less credit and verified credit requirements was previously available for students with disabilities is no longer offered for students that entered high school after the 2012-2013 school year. Schools are under increased pressure to maintain graduation rates and meet state and federal graduation indicators. Summer online credit recovery programs are one way school districts address this increasing focus.

**Background**

The path to high school graduation requires students to pass their courses in sequential order and move consecutively from freshman to senior year. When students fail initial courses as freshmen and do not accrue enough credits to become classified as sophomores, the precarious path to on-time graduation is jeopardized. Although the school district in this study exceeds the state and national On-Time Graduation rates for all students, disparities exist among specific subgroup graduation rates. In the 2018 cohort, the graduation rate gap between all students and English Learners was 40%. Special education, economically disadvantaged, and Black students in the district graduate at lower rates than White students. Economically disadvantaged students and English learners did not meet federal graduation indicated targets for the 2018-2019 accountability year.

In an attempt to maintain on-time graduation rates and reduce dropout rates, school districts such as the one in this study implement credit recovery programs. These credit recovery programs are often in the form of accelerated online learning and are commonly implemented in the summer months. In an effort to improve student graduation rates and address graduation disparities, many school districts in Virginia implement summer credit recovery programs that utilizes online learning as opposed to traditional direct instruction. Online learning is defined as education in which instruction and content are delivered primarily over the internet (Watson, & Gemin, 2008).

Summer credit recovery programs often target those students who have failed required core courses in the content areas of English, math, social studies, and science. At the end of the freshman year and each continuing year, students who fail a core course required for graduation have several options for credit recovery. The student may choose to retake the course in traditional face-to-face instruction the following semester. Depending on the student's individual schedule and acquired credits, the student may also be able to retake the course in an online setting during the regular school day. The district also offers an alternative school setting for students who are not finding success in the traditional setting. Finally, many students choose to re-take the failed course in an online summer session. The intention of an expedited summer session is for the student to stay on track the following fall semester with the four-year course plan and maintain the four-year graduation rate.

**Program Description**

The summer online credit recovery includes software that is used to provide pre-assessment to determine mastery level in a specific content. The pre-assessment results

determine individual student pathway and learning objectives in an effort to allow the student to focus more time on needed content and less on mastered content. The student may choose to re-take the failed course in an accelerated online format during the summer rather than repeat the course in a traditional school setting during the school year. The purpose of the summer program is to enable the student to stay on track for graduation by recovering the lost credit before the next scheduled semester. Retaking a failed course during the next school semester interrupts students' 4-year plan toward graduation and places them further behind. Recovering lost credits in the summer months maintains the traditional course sequence offered during the school year. The expected outcome of the program is that after successful participation, students stay on track with their peer cohort for Virginia on-time graduation.

**Context.** The context of the credit recovery program in this study is a public school district in Virginia. It serves students in a suburban county in nine elementary schools, four middle schools, and three high schools. Fowler (2009, p. 95, Table 4.3) identifies Virginia as a predominately traditional state, similar to other southern states. Over 800 instructional staff members and 600 support staff members support the district's 11,597 students. Over 3,800 students attend the district's three high schools (VDOE, 2019).

The race and ethnicity statistics for the school district for the 2017-2018 school year was 58.5% White, 17.4% Black, 13.0% Hispanic, and 7.9% two or more races (VDOE, 2019). English Learners (EL) make up 6.4% of the district population. Students with disabilities account for 15.4% of enrollment and 35.7% of the students are classified as economically disadvantaged (VDOE, 2019). To be considered economically

disadvantaged, students must be eligible for free or reduced-price meals, receiving Temporary Assistance for Needy Families (TANF), or eligible for Medicaid (VDOE, 2018).

The class of 2018 had an on-time graduation rate for all students in the school district of 92.1%; combined dropout rate for the district's three high schools was 2.8% (VDOE, 2019). Students classified as EL or economically disadvantaged in the school district have on-time graduation rates lower than the state average for those populations. The EL on-time graduation rate for cohort 2017 was 61.1% and dropped to 50% for cohort 2018. Both cohorts were lower than the state averages for EL students (73.8% and 72.5%).

In previous years, all district students were required to earn 28 credits for graduation as opposed to the 22 credits required by the state of Virginia for a state standard diploma. Beginning with the 2015-2016 Program of Studies, students in the district may choose to follow the state standard diploma of 22 credits, which does not require the foreign language elective the district's diploma requires and allows for fewer electives. This change was implemented to encourage at-risk students to remain in school and focus on credit recovery and completing high school requirements.

**Description of the program.** The summer online credit recovery program operates during the months of July and August at one high school, which serves as the single summer location of credit recovery for all three of the district's high school students. The district advertises the program through public website and internal school communication. School counselors and teachers reach out to families of students who have failed core courses. The fee for the summer program is $150.00 per course. The

program is free to students who receive free or reduced-price lunch and are enrolled in the school district. Breakfast and lunch are not provided by the school district. Transportation is not provided by the school district for the summer program. High school students are encouraged to utilize the city bus line to attend the program. Licensed teachers are trained in use of the online platform and act as facilitators and tutors. Teachers are available on site Monday through Thursday for 6 hours per day to provide technical help with the online program. Teachers monitor student progress in the online program as well as provide one-on-one or small group tutoring as needed. A special education teacher is also available on site for students requiring direct instruction or accommodations to assess assessments. Students must attend a mandatory orientation day to learn the technical nature of the program and are expected to attend a minimum of 2.5 hours daily during posted summer school hours. Parents and students are provided with a pacing guide for the summer. Teachers report student progress to parents weekly by telephone or email. Students can work on the program from home and can access the online course at any time of the day or night. Students must come on site to complete assessments. Due to the accelerated nature of the courses, students may only attempt one course at a time and may retake the course when necessary.

The courses offered online in the summer program are:

- English
  - English 9
  - English 10
  - English 11
  - English 12
- Math
  - Algebra I
  - Algebra II
  - Geometry
- Science
  - Earth Science
  - Biology
- Social Studies
  - World History I
  - World History II
  - World Geography
  - Virginia and United States History
  - U.S. Government

The structure of credit recovery courses allows students to pretest in each unit within the course. This pretest assesses previous knowledge and allows students to be exempt from select units due to mastery of previous knowledge. This critical component allows students to proceed through the online course much quicker than taking the traditional course again. Repeating the traditional face-to face course interrupts the course sequence and often inhibits the students from graduating on time. Unit mastery allows the student to focus on needed content only and allows the student to move quickly and efficiently through the course. The theory behind unit pretests is this structure aids in ensuring an accelerated timeline for course completion and promotes student engagement and success.

Logic models are commonly used in program evaluation. They are closely tied to theory-based evaluation approaches because the essence of theory-based evaluation is to reveal the underlying theory of how the programs intends to achieve its intended

outcomes (Mertens & Wilson, 2012 p. 244). The Logic Model in Figure 1 displays the sequence of actions in the summer credit recovery program, describes what the program will do, and shows how investments will be linked to the results (Mertens & Wilson, 2012). The logic model begins with the program context that students fail a required core course and risk not graduating on time.

***Inputs*.** Inputs are the fiscal, human, and physical resources going into the program. Prior to implementing the summer online credit recovery program, several inputs led to implementation. District and school leaders decided to utilize individualized online learning as a way to expedite course credit recovery and keep students on track for on-time graduation. Edmentum Courseware is the software utilized by the school district.

***Outputs*.** The outputs or processes of the logic model outline various activities of personnel involved and services given in the program. These include activities of students, teachers, and administrators. To plan for credit recovery, student data in the form of course failure must be analyzed at the school and district level to determine required funds. Summer school infrastructure and facilities must be prepared. Students and families are notified of the programs availability in writing and encouraged to attend information sessions. Parents complete student registration forms. Four teachers are hired, one each for English, math, social studies, and science. Teachers and students attend training on the online learning platform. Teachers who monitor student progress within the program and open up assessments completed in a secure testing environment facilitate the online program. Teachers provide pacing guides and offer onsite support as well as communicating weekly progress to parents. A special education teacher provides

direct instruction to students requiring services and accommodations per their individualized education plan.

**High School Summer Credit Recovery Utilizing an Online Learning Program**

**Context:** High school students fail required core courses and risk not graduating on time.

**Logic Model**

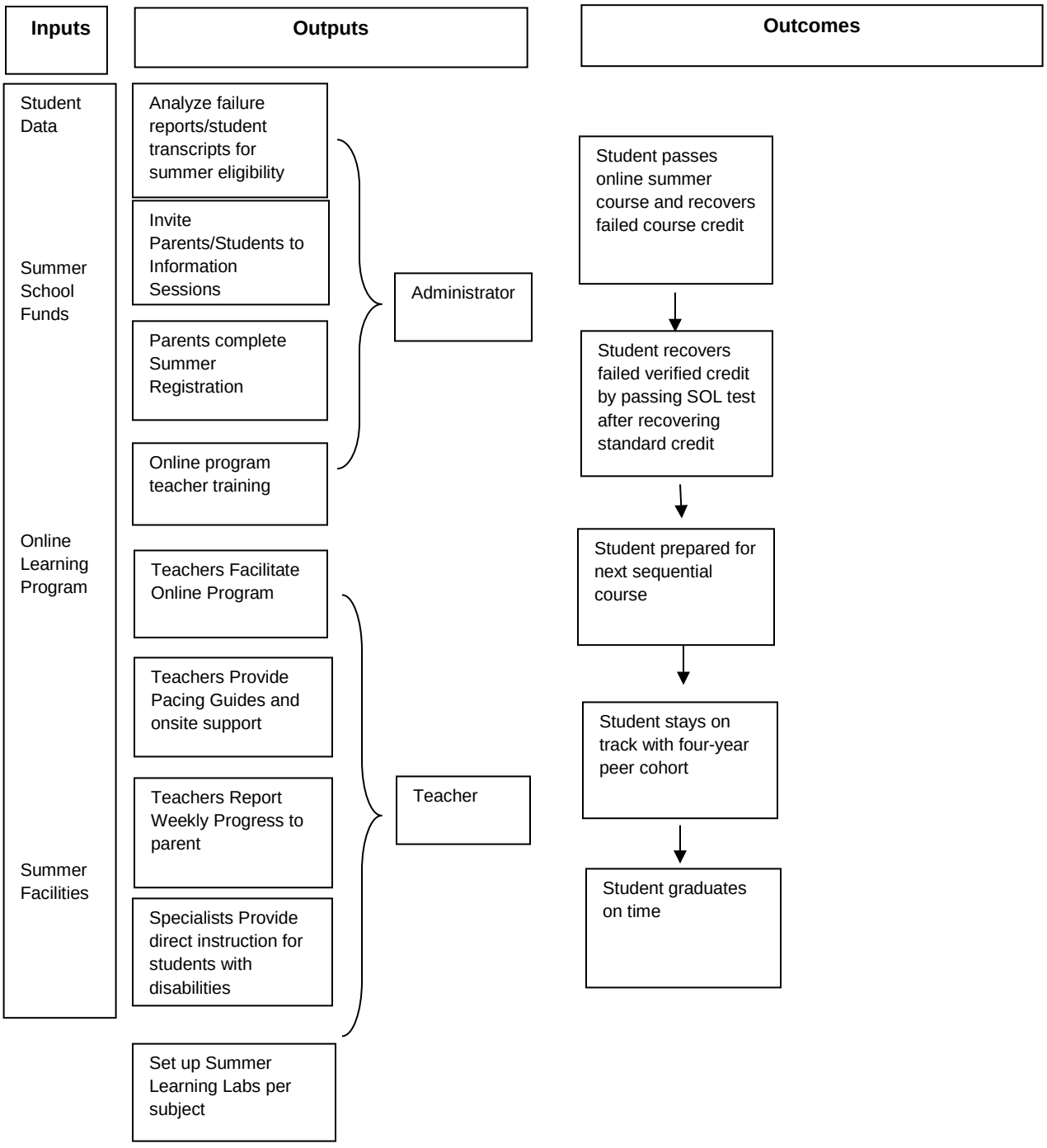


*Figure 1*. Logic Model of the summer online credit recovery program.

***Outcomes*.** The outcomes are the school districts intended expectations of the program. Outcomes are divided into short- (immediate), medium- (one year out) and long-term. The short-term immediate goal is that students recover the lost course credit and are prepared to earn their verified credit by passing the accompanying SOL test. The medium outcome expectation is the student goes on to graduate on- time with their four-year cohort and the school district meets or exceeds the state graduation rate. The long-term outcome expectation is that high schools maintain their state graduation accreditation. The Graduation and Completion Index is one of the school quality indicators under the revised Standards of Accreditation. High schools must meet an index of 88 or higher or have a 2.5 percent improvement from the previous year to maintain accreditation status.

**Overview of the Evaluation Approach**

An educational evaluation study is one that is designed to make judgements about the merit, value, or worth of the program to improve the program (Stufflebeam & Shrinkfield, 2007). Program evaluation begins with a strong understanding of the program being evaluated. The program theory assumes that if the district offers the credit recovery program, then students will recover credits needed for graduation. The theory is illustrated in Figure 2. If students recover those credits in a timely manner, the student is more likely to remain on track with their peer cohort and graduate on time. The evaluation approach to this credit recovery program lies in the pragmatic paradigm. The pragmatic paradigm is a philosophical framework that supports the use of a mixed methods approach. This is the belief that reality is interpreted individually, that methodological choices will be determined by the evaluation question, and focuses

primarily on data that are found to be useful to stakeholders, and advocates for the use of mixed methods (Mertens & Wilson, 2012).

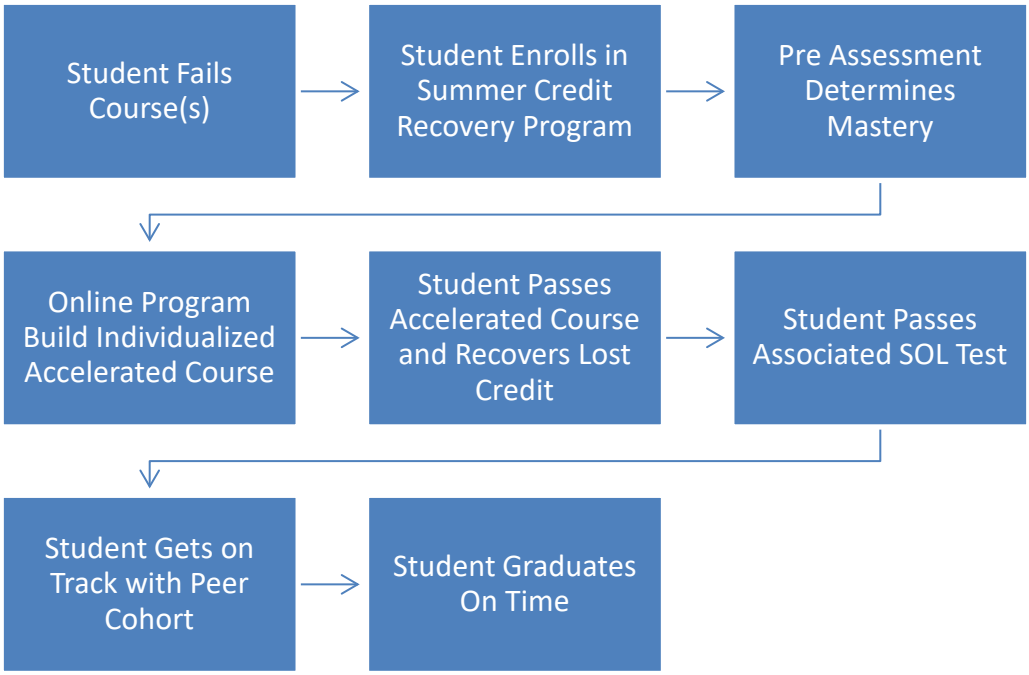


*Figure 2*. Program Theory of the Summer Online Credit Recovery Program.

The evaluation questions provide the basis for the program evaluation and those questions primarily focus on data that are useful to stakeholders as well as determine the methodological choices. The evaluation questions in this online summer credit recovery program evaluation rely on a statistical approach and requires quantitative archival data.

**Program evaluation model**. Bryson, (2011), provides two general categories of planning. The rational view is that the planning process is sequential, observable, and capable of being evaluated. The interactive view of planning reflects an emphasis on the human dynamics of decision-making. While planning to make a change in a school district, a plan should align with the context and needs of the organization. Three issues must be explored to assess an organization's readiness for change:

- Context- the external, political, social and economic forces outside of our control
- Capacity-comprehensive understanding of the change model, why it was chosen
- Commitment- stakeholders must be willing to participate in the process and have resources and support in place (Rutherford, 2009).

The program evaluation model used in this study is Stufflebeam's CIPP model (Stufflebeam & Shinkfield, 2007). The CIPP model is appropriate to this program evaluation as it supports the planning focus outlined by Bryson (2011) and Rutherford (2009). It is a comprehensive approach, is the most used model in education, and focuses on test scores, focus groups, and surveys. This four-part model emphasizes context evaluation that determines problems and opportunities; the input evaluation assesses participant and staffing characteristics; the process evaluation assesses the implementation of plans; and the product evaluation assesses both the intended and unintended outcomes (Mertens & Wilson, 2012). The CIPP model is a Use Branch model that focuses on making information from the evaluation useful to stakeholders (Mertens & Wilson, 2012). It fits within the pragmatist philosophy. The view of culture and society that pragmatism came to adopt is essentially optimistic and progressivist (Crotty, 2015, p. 74).

The context, input, process, product (CIPP) model is pertinent to this program evaluation because it can contribute to the decision-making process in program management. This four-part model emphasizes the context evaluation that determines problems and opportunities; the input evaluation assesses participant and staffing characteristics; the process evaluation assesses the implementation of plans; and the product evaluation assesses both the intended and unintended outcomes (Mertens & Wilson, 2012).

Product evaluation is the final part of the CIPP model (Mertens & Wilson, 2012). Although the CIPP Model is a systematic way of looking at many different aspects of a given process and is a time-tested method for focused evaluation, one limitation is that stakeholders for whom information is provided are often the most powerful (Mertens & Wilson, 2012, p. 110). Another limitation is that it can be easily subjective and certain groups could inadvertently be overlooked. Evaluators need to look for other evidence and possibly use indirect ways to stimulate information from stakeholders with language, cultural or disability barriers (Mertens & Wilson, 2012, p. 128). Ethical considerations and interpersonal relations must also be considered (Sanders & Sullins, 2006, p. 65).

With a heavy emphasis on context and focus on test scores, the CIPP model is the most appropriate for this program evaluation. The context of the credit recovery program is that high school students fail core courses needed for graduation and risk not graduating on time. The inputs evaluate the resources to determine whether they are consistent with the tenets of the context. The inputs include student data in form of report cards and standards of learning scores, summer school funds from the VDOE Project Graduation Grant, the online program, and summer facilities.

The process, or outputs, evaluates to what extent the operations of the credit recovery program are consistent with plans and implemented with fidelity (Mertens & Wilson, 2012). The administrators of credit recovery analyze failure reports and student transcripts for summer eligibility. They invite parents and students to information sessions and parents complete the summer registration form. Teachers are trained to facilitate the online learning program and provide pacing guides and online and onsite

support. Teachers also provide weekly, midterm, and final progress reports. Special education teachers provide direct instruction and accommodations as needed.

**Purpose of the evaluation.** This program evaluation of a summer online credit recovery program aims to provide school and district administrators with quantitative data about the effectiveness of summer credit recovery utilizing an online learning program. This evaluation is summative and seeks to analyze four years of quantitative data post program completion. This will determine to what extent the program met its short term intended goals. The purpose of this study is to provide data on the demographic profile of the students who participated and the effectiveness of the program as it relates to success of student credit recovery, verified credit achievement, and remaining on track with peer cohort for on-time graduation. This information will provide school and district administration pertinent data as to the degree of the program's effectiveness.

**Focus of the evaluation.** The focus of this evaluation is on product evaluation, a part of the CIPP model. The product, or outcome, asks to what extent were the intended results reached. The immediate intended outcomes of credit recovery are that the student recovers the credit by earning a passing grade in the online course, is prepared to pass the verified credit, prepared for the next sequential course, and stays on track for graduation. The intermediate outcomes include the student graduating on-time, student preparation for college or workplace entry and the schools maintaining or exceed the Virginia On-Time Graduation Rate. The long-range outcome is for high schools in the district to remain accredited for maintaining state standards related to on-time graduation as well as Federal Graduation requirements. Ultimately, the use of the CIPP model will provide

information to help district and school leaders improve their credit recovery program for students as a chief principle of the CIPP model is not "prove, but to improve" (Stufflebeam & Shinkfield, 2007, p. 331).

**Evaluation Questions.** The four evaluation questions below guided the program evaluation of summer credit recovery. Each question was designed to evaluate the efficacy of the program. The evaluation questions were answered using historical student data that includes student demographic data, course final grades, state Standard of Learning test scores, state cohort status data, and on-time graduation rates of students who participated in the program.

1. What is the demographic profile of the students who have participated in this program?
2. What percentage of participating students passed the summer online class and recovered the required course credit?
3. What is the relationship between participating students' course grades and their Standard of Learning Test Scores?
4. What percentage of participating students remained on track with their peer cohort?

**Definition of Terms**

Achievement Gap: Differences in academic performance among student groups

CIPP Evaluation: an evaluation model created by Daniel Stufflebeam that stands for evaluations of an entity's context, inputs, processes, and products (Stuffebeam & Shrinkfield, 2007).

Cohort: A group of students who enter ninth grade together and are expected to graduate high school within four years (VDOE, 2018).

Credit Recovery Program: A program designed to provide students an alternative method of instruction that allow them to recover academic course credits lost due to course failure.

Dropout: A student who leaves school before graduation

Logic Model: A visual representation of a program, its components and objectives, used in program planning and evaluation (Mertens & Wilson, 2012).

SOL tests: Standards of Learning tests that are given at the end of certain core subjects for high school students. These tests are required for graduation (VDOE, 2018).

Virginia On-time Graduation Rate: expresses the percentage of students in a cohort who earned a Board of Education-approved diploma within four years of entering high school for the first time. Percentages are based on longitudinal student-level data and account for student mobility and retention and promotion patterns (VDOE, 2018).

# CHAPTER 2

# REVIEW OF LITERATURE

This chapter provides of a review of the literature pertinent to this study. An understanding of current national graduation and drop out trends is necessary for understanding the metrics associated with statistics surrounding students who drop out of high school. Additionally, a review of the predictors surrounding high school dropout and a review of dropout prevention initiatives is necessary for evaluating a high school credit recovery program utilized to maintain on-time graduation. Finally, a review of the theory and research design of the specific online course platform used in the summer program is essential for framing the context of this program evaluation.

## Graduation Trends

The National Center for Education Statistics ([NCES], 2016) latest compendium report, *Trends in High School Dropout and Completion Rates in the United States: 2014,* provides trend data over the last four decades for high school dropouts and high school completers. This report updates a series of NCES reports on high school dropout and completion rates that began in 1988 and are compiled from state education agencies reporting to the US Department of Education. The rates featured in the report are defined:

> An array of nationally representative surveys and administrative datasets to present statistics on high school dropout and completion rates. The report includes estimates of the percentage of students who drop out in a given 12-month period (event dropout rates), the percentage of young people in a specified age

> range who are high school dropouts (status dropout rates), and the percentage of young people in a specified age range who hold high school credentials (status completion rates). In addition, the report includes data on the percentage of students who graduate within four years of starting ninth grade (adjusted cohort graduation rates), an estimated on-time graduation rate used to examine long-term trends (averaged freshman graduation rate), and data on GED test takers. (NCES, 2016)

Each year, almost one-third of the 1.2 million public high school students fail to graduate with their class. These well-documented trends indicate that close to half of African Americans, Hispanics, Native American, and Special Education students fail to graduate (NCES, 2016). There are nearly 2000 U.S. high schools with less than 50% graduation rates. These schools are concentrated in 50 large cities and in 15 primarily southern and southwestern states. These data represent a collective metric utilized by states, districts, and schools to maintain accurate reporting of our nation's graduation rates.

**Statistics and reports.** The adjusted cohort graduation rate (ACGR) is the percentage of public high school students who graduate on-time divided by the number of students who form the adjusted cohort for the graduating class (NCES, 2016). The numerator is based on the number of students who graduate in four years or less with a regular high school diploma. This common metric has been used by states, districts, and schools since 2010 to promote greater accountability and develop strategies that will help reduce dropout rates and increase graduation rates in school nationwide (U.S. Department of Education, 2015). The trend data provided by the NCES as well as state and local

reporting indicate achievement gaps in graduation and dropout statistics when looking closely at race, ethnicity, gender and disability.

To accurately monitor students, states and school districts are tasked with following the progress of each individual Grade 9-12 student throughout the school year. It is also important to maintain documentation of students who enter or leave schools or districts within their state. In Virginia, students who withdraw from one school district and enroll in another will not become dropouts due to the monitoring at the state level. If a student is withdrawn from a Virginia school and not contacted by a new school in a different state for records, that student is considered unconfirmed and becomes a dropout on the adjusted cohort report, regardless of grade level, until enrollment in another state is confirmed (VDOE, 2017).

On-time graduation is defined as graduation with a regular high school diploma within four years after starting ninth grade for the first time (NCES, 2016). Regular high school diplomas are granted based on state determined coursework completion and performance standards. The state of Virginia allows English Learners and students with disabilities more than the standard four years to earn a diploma while still being considered on-time graduates (VDOE, 2017). The national adjusted cohort graduation rate for public high school students for the 2012-2013 school year was 81.4%, the highest level in US history and Virginia's state adjusted cohort rate was 84.5% (NCES, 2016). Private school students, students that earn special diplomas due to disability or students who earn certificates of GED are not included in ACGR calculations because they are not considered regular graduates (NCES, 2016). While the ACGR is a 4-year on-time graduation rate, the event dropout rate produces the percentage of students who drop out

in a single year. There is ample research that points out limitations and bias among the varying statistics related to graduation and dropout rates.

Heckman and LaFontaine (2010) identify a fundamental problem in addressing issues surrounding high school dropouts by systematically considering the sources of bias across a number of nationally represented sets of data. They argued the possibility of potential bias in the statistics and opposed the inclusion of students who receive a General Educational Development (GED) certificate. Although these students are included in on-time graduation rates, the recipients of GEDs are disproportionally minority students.

The event dropout rate estimates the percentage of high school students who left high school between the beginning of one school year and the beginning of the next without earning a high school diploma or an alternative credential like GED (NCES, 2016. Event dropout rates have declined since 1972, trending downward from 6.1% to 3.4% in 2012. Unlike state dropout rates, national event dropout rates include public and private school students while also including students who obtain a diploma or an alternative credential such as GED. Virginia's event dropout rate was 1.9% for 2012 and was 1 of 8 states that had an event dropout rate less than 2.0%. The NCES (2016) reports that have been no measurable differences between 1990 and 2012 in event dropout rates.

Although recent reports and statistics indicate adjusted cohort rates are increasing and event dropout rates are trending downward, gaps for various subgroups are prevalent in both national and state level reporting. Table 1 shows the public high school 4-year ACGR by race/ethnicity and selected demographics for the class of 2012-2013 that were the first time, ninth-grade cohort in 2009-2010.

Table 1

*Class of 2013 On-time Graduation Rates*

| | Total ACGR | Asian | Hispanic | Black | White | ED | EL | SWD |
|---|---|---|---|---|---|---|---|---|
| Nation | 81.4 | 88.7 | 75.2 | 70.7 | 86.6 | 73.3 | 61.1 | 61.9 |
| Virginia | 84.5 | 90.2 | 76.1 | 76.8 | 88.6 | 74.0 | 51.8 | 51.5 |
| District | 90 | 100 | 86.4 | 79.1 | 91.8 | 75.3 | 65.2 | 78.7 |

*Note.* ACGR = adjusted cohort graduation rate; ED = economically disadvantaged; EL = English learners; SWD = students with disabilities

Although Virginia's 84.5% ACGR is higher than the US rate of 81.4, the Virginia rates for English Learners and students with disabilities are considerably lower.

This disparity among various subgroups represent what is commonly called the achievement gap and occurs when one group of students (such as, students grouped by race/ethnicity, gender) outperforms another group and the differences in average scores for the two groups is statistically significant that is, larger than the margin of error (NCES, 2016).

**Graduation gaps.** Although the event dropout rate has declined since 1972, the NCES (2016) reports that broken down by race, the estimated event dropout rates are 2.4% for White students, 4.8% for African American students, and 5.8% for Latino students with no significant difference in the 2009 event dropout rate for males and females (American Psychological Association, 2012). Poverty proves to be a substantial link for high school dropout rates as students from low income families are five times more likely to drop out of school than students from high-income families (American Psychological Association, 2012).

Robert Balfanz, a John Hopkin's education research scientist, introduced the term "dropout factory." The term was used to describe the high schools in which less than 60% of the freshman class remained enrolled four years later. His 2004 study identified

roughly 2000 such high schools throughout the United States concentrated in 50 large cities and 15 primarily southern and southwestern states (Balfanz & Legters, 2004). The most common characteristic of the schools was their disproportional student body makeup of children of color and their locations in high poverty areas that included high rates of unemployment, crime, and poor health (Balfanz & Legters, 2004). This seminal study garnered significant national attention and helped focus intervention and a high school reform movement to improve graduation statistics.

**Predictors of High School Drop Out**

There are academic and non-academic indicators surrounding students who drop out of high school. Predictors of dropping out of school include several early warning academic indicators like disengagement in the pre-high school years, tardiness, absenteeism, skipping class, and low grades. Nonacademic indicators include life events like pregnancy, health problems, and substance abuse, caring for an ill family member or students needing to work to support themselves or family members. Limited labor market prospects, increased substance abuse, reliance on public assistance and juvenile and adult incarceration are common characteristics associated with high school dropouts (Rumberger & Lim, 2008).

In the Race to the Top grant, the U.S. Department of Education defined high needs students as:

> Students at risk of educational failure or otherwise in need of special assistance and support, such as students who are living in poverty, who attend high-minority schools (as defined in the Race to the Top application), who are far below grade level, who have left school before receiving a regular high school diploma, who

> are at-risk of not graduating with a diploma on time, who are homeless, who are in foster care, who have been incarcerated, who have disabilities, or who are English Learners (USED, 2012).

This publication also called for restructuring of public schools so that academic achievement could be prevalent for all students.

Many studies indicate that course failure during the first year of high school is one of the strongest influences on a student's final decision to drop out of high school (Balfanz & Neild, 2006; Neild, Stoner-Eby, & Furstenburg, 2008; Somers & Piliawsky, 2004). Specifically, research indicates that African American and Hispanic males are most likely to fail courses in math and English their first year of high school. Finally, the first semester of ninth grade is considered one of the most critical semesters in a student's high school experience often due to an increase in school size and increase in student peer group (Balfanz & Neild, 2006: Neild, Stoner-Eby, & Furstenburg, 2008; Roderick & Camburn, 1999).

The U.S. Department of Labor's Bureau of Labor Statistics (2013) indicate that a higher number of unemployed adults are high school dropouts and a lower percentage of dropouts (compared to high school graduates in the 25 and older age group) are actively in the workforce. Leaving high school without a diploma and with few academic skills limit a person's economic and social advancement through the remainder of their working adulthood (Rumberger, 1987). A comparison of dropout to high school graduates indicated the average high school dropout costs the national economy roughly $200,000 over the course of a lifetime in terms of lower tax contributions, higher dependence on Medicare and Medicaid, higher rates of unlawful activity, and higher

reliance on welfare (Levin & Belfield, 2007). The Council on Virginia's Future (VDOE, 2008) reported that dropouts from the class of 2008 will cost Virginia almost $7.6 billion in lost wages over their lifetime.

**Dropout Prevention**

Although statistics show current graduation rates are the highest ever recorded, dropout prevention continues to be a local and national focus due to increased state and federal accountability measures in education but also due to the social implications associated with adults who have dropped out of high school. Dropout prevention programs are interventions that include counseling, monitoring, academic support, community based services, and curriculum restructuring. These interventions may be implemented for middle or high school students as well as students that have already dropped out of school.

To reduce the dropout rate in America, the National Dropout Prevention Center (2018) has piloted and analyzed years of research that has identified the 15 most effective strategies for dropout prevention and reducing the dropout rate and they are grouped in to four general categories:

**Foundational Strategies**

- Systemic Approach
- School-Community Collaboration
- Safe Learning Environments

**Early Interventions**

- Family Engagement
- Early Childhood Education
- Early Literacy Development

**Basic Core Strategies**

- Mentoring/Tutoring
- Service-Learning
- Alternative Schooling
- After-School/Out-of-School Opportunities

**Managing and Improving Instruction**

- Professional Development
- Active Learning
- Educational Technology
- Individualized Instruction
- Career and Technical Education (CTE)

Online summer credit recovery falls under four of these effective strategies. Alternative schooling and after/out-of-school opportunities are basic core strategies, both a component of summer credit recovery. Managing and improving instruction include educational technology and individualized instruction provided by the competency-based software that provides individual learning paths.

There are several policies, initiatives and laws at the state level that support Virginia's vision of college and career readiness and dropout prevention. Five Virginia laws related to dropout prevention include 22.1-209.1:2 Regional alternative education programs for certain students, 22.1-199.1. Programs designed to promote educational opportunities, 22.1-253.13.4 Standard 4. Student achievement and graduation requirements, 22.1-199.4. At-risk student academic achievement program and fund, and 22.1-253.13:2. Standard 2. Instructional, administrative, and support personnel related to truancy and dropout prevention (Code of Virginia, 2018). The Virtual Learning Advisory

Committee was created in 2014 to advise VDOE on online courses, in-service training, and digital instructional resources necessary for school districts to meet graduation requirements, strategic planning to expand blended and online learning opportunities in Virginia's public schools, including cost-effective access to high-need and low-demand courses, training, content and digital resources (VDOE, 2018).

The 2016 Virginia General assembly approved House Bill 895 and Senate Bill 336, which directed the Virginia Board of Education to develop and implement a Profile of a Virginia Graduate. The Virginia Department of Education has established The Profile of a Virginia Graduate that provides the framework for the requirements students must meet to earn a standard diploma or an advanced diploma. This framework describes the knowledge, skills, experiences, and attributes that students must accomplish to be successful in college/and or the work force and be "life ready" and consider the 5 Cs:

- Critical thinking
- Creative thinking
- Collaboration
- Communication
- Citizenship. (VDOE, 2018)

Instruction supporting this framework allows for virtual learning programs in Virginia. The Virginia General Assembly directed the Board of Education to establish criteria for the approval of virtual school programs that provide instruction to Virginia students. These programs provide flexibility for diverse learners and at-risk students and ensures the online instruction provided by approved online providers is aligned with Virginia Standards of Learning and provided by highly qualified teachers (VDOE, 2018). Improvements in instructional technology in the form of credit recovery permits students

who have failed courses due to inability to grasp content, excessive absences or other factors associated with academic failure.

**Online Credit Recovery**

In an effort to keep credit deficient students in school and from referring them to alternative education centers, many school districts are utilizing online credit recovery programs. (Rumberger, 2011, p. 160). Online credit recovery programs allow students the flexibility of working outside of school hours and/or during the summer months. The online program gives an initial assessment which quickly accesses mastery and deficiency of specific content strands. This diagnostic approach provides instruction only where the student exhibited weakness, allowing the student to experience individualized learning paths and proceed through the condensed course. Students can recover lost credit within a matter of weeks compared to semester or yearlong-based make up courses. This competency-based approach is beneficial as it focuses on what the students need to learn and does not waste time on content that was previously mastered in the original course.

Pre-assessment that is mastery based aims to reengage students that have become disengaged in school. Bridgeland, (2006) reported that 47% of high school dropouts indicated their reason for dropping out of high school was due to disinterest in classes and school. Pre-assessment to determine mastery alleviates the need to repeat unnecessary concepts that could disengage students' focus. Several studies have explored the benefits and challenges associated with online learning for at-risk high school students.

The U.S. Department of Education's 2009 meta-analysis of more than 1,000 empirical studies of the effectiveness of online learning, found that there was a close to even split of studies of exclusively web based learning compared to studies of blended

web based and face to face instruction. The key findings were that students in online learning programs performed modestly better than those receiving face-to-face instruction but there are only a limited, small number of rigorous published studies in K-12 education settings (Means, Toyama, Murphy, Bakia, & Jones, 2009).

One study surveyed school administrators in 23 North Carolina schools who significantly improved their graduation rates over a 5-year period; 44% of the schools implemented an online learning credit recovery program that administrators deemed as contributing toward increased graduation rates (Robertson, Smith, & Rinka, 2012). When asked to identify the top strategies for improving the dropout rate, the school leaders listed Academic Support (91%), School/Class Environment (61%), Transition from Middle to High School (61%), Behavioral Interventions (48%), After School Programs (48%), Family Engagement (43%), and Mentoring (30%) (Robertson et al., 2012).

Clark, Lewis, Oyer, and Schreiber (2002) determined that highly motivated, independent, and self-disciplined students are most successful with virtual schooling. Most of this early research into online learning came at a time when virtual learning was primarily for advanced students seeking additional opportunities for courses not available in their school district. Similarly, empirical research indicates self-determination is linked to increased school attendance and post-high school outcomes.

Self-determination of students as it relates to education involves student's interest in learning, valuing education, and having confidence in their strengths. These are not characteristics that typically describe at-risk students who fail courses and are placed in online programs. Students in an online credit recovery program need encouragement and support with self-determination and self-discipline skills. Zhang and Benz (2006)

reviewed extant research that documented empirical relationships between self-determination and high school to college transitions in students from diverse cultures. Their research indicated that choice making, decision making, problem solving, goal setting and attainment skills, self-management, self-advocacy, self-efficacy, self-awareness, and self-knowledge all characterize self-determination.

The online program utilized by the school district for summer credit recovery is Edmentum Courseware. The company provides digital and online courses and was formerly known as PLATO. PLATO, built by scientists at the University of Illinois in the early 1960s, is considered one of the first authentic computer-assisted learning systems created for widespread use (McLeod, 2017). Edmentum courseware serves over one million students and is used daily by more than 65,000 teachers and administrators (Edmentum, 2018). While online courses include Career and Technical Education (CTE), electives, world languages, and advanced placement, the school district utilizes core course content aligned to Virginia standards. The VDOE (2018) approves Edmentum courseware for original credit and credit recovery.

Edmentum's courseware is designed around seven theory and research-based principles of effective instruction (McLeod, 2017):

- Constructivist learning
- Skills mastery focus
- Practice
- Real-world application
- Rigor, relevance, and complexity
- Multimodal learning
- Passion, perseverance, and grit

Edmentum courses include warm up questions in which students are asked to think and record their views of how something works. Later in the lesson, they self-reflect and have

the ability to revise their initial views, an important element of constructivist learning (McLeod, 2017). Components of constructivist learning in the courseware also include scaffolding lessons, interactive challenges, constructing math proofs, and experiments.

In addition to the constructivist theory, Edmentum incorporates behaviorist-learning theory into course creation. Each course is designed in units that contain multiple lessons and individual lessons are skills based with tutorials and self-paced activities (McLeod, 2017). Course structure established on scope and sequence of state standards includes student orientation, syllabus, and one or more units. The unit includes a pre-test, online discussion, lessons, practice, activities, and post-test (McLeod, 2017). Practice and reinforcement are provided in the courseware in the form of warm ups and lessons. Courseware incorporates real-world applications across content areas. Edmentum courses utilize the Daggett Rigor/Relevance framework (McLeod, 2017). This framework has four quadrants that represent the knowledge taxonomies of acquisition, application, assimilation and adaptation. To further align curriculum and assessment, Edmentum collaborates with Dr. Norman Webb and subject matter experts and item writers are trained in his Depth of Knowledge model of content complexity (McLeod, 2017, p. 20).

The principle of multimodal learning widely incorporated in Edementum courseware involves coordinating multiple representations of concepts. This is based on the work of cognitive psychologist Allan Paivio's research in parallel processing and numerous other quantitative studies on multimodal online instruction. Parallel processing involves the mind representing objects in multiple modalities (McLeod, 2017). Examples of multimodal methods in the courseware include click-to-see images, systematic

interactions, interactive maps, timelines, text-to-speech, translations, video clips, and highlighting tools.

The final principle of Edmentum's courseware is passion, perseverance and grit. These concepts connect directly and are similar to the early work of Clark et al. (2002) on self-discipline and motivation. Edmentum's program is designed around cognitive scientist Angela Duckworth's research on grit. Courseware is designed to present learning stimuli in salient and compelling ways, provide intensive opportunities for rigorous, self-directed practice in a way that challenges students to strive above their current level of proficiency (McLeod, 2017, p. 18).

Edmentum collaborated with the Marzano Research Laboratory to study the relationship between student learning and effective teacher pedagogy in an online setting. The study included 23 schools in 12 states utilizing Edmentum for original credit, credit recovery, intervention, and advanced placement. The study found that teacher engagement, as measured by the amount of time teachers were logged into the courseware as well as the number of times they logged in, was the strongest predictor of higher levels of student achievement (Edmentum &Marzano, 201). The 13 best practices identified provide a framework to help teachers ensure engaging online interactions.

- Communicating course/assignment rules and procedures
- Providing students with all materials needed to complete an assignment
- Clearly presenting the goal/objective for each assignment
- Offering encouragement and positive feedback to students
- Allowing students to keep track of their learning progress
- Accessibility to students via electronic communication as well as face-to-face
- Monitoring student work
- Knowing students by name and recognizing them outside of the online environment
- Allowing students to progress through assignments at their own pace
- Providing help to understand and practice new knowledge
- Allowing students to ask questions during online course/assignment

- Treating all students equally
- Adding external resources to assignments aligned to local objectives

**Summary**

The research examined in this chapter included current national graduation and drop out trends. While the current research reports graduation rates as the highest in history, there are well-documented trends that indicate achievement gaps and disparity among various subgroup populations. Additionally, researchers indicate fundamental problems with bias surrounding the data that includes students that receive a GED since those students are disproportionally minority.

Effective strategies for dropout prevention are grouped into four broad categories: Foundational strategies (school-community), early interventions, basic core strategies, and managing and improving instruction (National Dropout Prevention Center, 2018). Online credit recovery in the summer months falls under two of these categories. Alternative schooling and after/out-of-school opportunities are basic core strategies, both a component of summer credit recovery. Managing and improving instruction include educational technology and individualized instruction provided by the diagnostic, competency-based software.

Online credit recovery programs offer students the flexibility of working outside of school hours and even at home during the summer months to quickly recover lost credit. The online courseware Edmentum provides a preliminary assessment that quickly accesses mastery and deficiency of content. This competency-based approach provides tailored instruction only where the student exhibited weakness, allowing the student to experience individualized learning paths and proceed through the course quickly with focused lessons. This approach is beneficial as it focuses on what the students need to

learn and does not waste time on content that was previously mastered in the failed course. Helping at risk students recover lost credits in this format might allow students to experience academic success, graduate on time and help school districts meet state and federal requirements related to graduation.

# CHAPTER 3

# METHODS

For this study, I completed a program evaluation of the summer online credit recovery program in a Virginia school district. To evaluate the online high school credit recovery program, the product component of the Context, Input, Process, and Product (CIPP) evaluation model was used to determine if the needs of the students and district stakeholders are being met. Product evaluations within the CIPP model are used to make decisions on whether a program is worth continuing, repeating, or extending to other settings (Stufflebeam & Shinkfield, 2007). The model emphasizes the context evaluation that determines problems and opportunities with online credit recovery; the input evaluation assesses participant and staffing characteristics; the process evaluation assesses the implementation of plans; and the product evaluation assesses both the intended and unintended outcomes (Mertens & Wilson, 2012). This product evaluation included gathering data to determine the extent the objectives are being met and will provide stakeholders with information that will allow them to decide whether to continue, discontinue or modify the program.

The philosophical worldview that supports this research is pragmatism. The research design of this program evaluation is quantitative ex post facto, or non-experimental. Hoy, (2010) describes ex post facto research as a situation that cannot be manipulated or controlled because the change in the independent variable has already occurred. By analyzing archival extant data and focusing on the outcomes in this product evaluation,

the information gained can be used to determine if the intended goals of the summer credit recovery program are being met as well as determining unintended outcomes. The results of this program evaluation have the potential to be used formatively as well as summative by the district's decision-making stakeholders.

## Participants

There were no active participants in this program evaluation. Archival data sources include information on all students who participated in summer credit recovery from 2015-2018. The students range from freshman who have completed their first year of high school, to term graduates. Some students are classified as freshman their second year of high school if they did not earn enough course credits to classify them as sophomores. Term graduates are students who were scheduled to graduate at the end of the school year with their 4-year cohort but were lacking required credits and attended summer credit recovery to recover a course credit required for graduation. Upon successfully earning the missing credit or credits in the summer program, term graduates graduate in August.

## Data Sources

Several extant data sources were used to determine the extent to which the online credit recovery program intended outcomes are being met. Archival summative and quantitative document reviews will provide data sets to answer the four evaluation questions.

**Demographic profile.** Demographic data were examined to determine characteristics of the population of students who participated in the program over a 4-year span. School district student data are reported to the Virginia Department of Education in the form of the student record collection. The data in the student record

collection were disaggregated by ninth grade entry date, current grade level, gender, ethnicity, race, socioeconomic status, disability status, and English learner status

**Student course grade reports.** Final grade data determined to what degree students passed summer courses and recovered failed course credit. The data were disaggregated by unique student identifier, course participation, final course grade, grade level, and gender.

**Student assessment history**. Standards of Learning (SOL) test result reports were obtained for each individual summer participant from the longitudinal application on the Virginia Department of Education's intranet portal for school district employees.

**Virginia cohort**. On-time cohort status of students who participated in the program over a four-year period was determined by reviewing reports in the cohort application on the VDOE's intranet portal for school district employees. Virginia cohort status reports include ninth grade entry year, expected graduation year, diploma type, and dropout status.

**Data Collection**

Data collection involved historical review of records and did not include active participants. Data collected were analyzed for student completion rates via summer online credit recovery during the 2015 to 2018 school years. To evaluate data quantitatively, a spreadsheet was developed in which the researcher categorized student demographics and the three measures. Table 2 illustrates the evaluation questions along with the data sources and analysis.

Table 2

*Evaluation Questions, Data Sources, and Analysis Methods*

| | Evaluation Question | Data Sources | Analysis Methods |
|---|---|---|---|
| 1. | What is the demographic profile of the students who have participated in this program? | Summer Course Grade Report<br>Student Record Collection | Descriptive Statistics |
| 2. | What percentage of participating students passed the summer online class and recovered the required course credit? | Summer Course Grade Report | Descriptive Statistics |
| 3. | What is the relationship between participating students' course grades and their Standard of Learning Test Scores? | Summer Course Grade Report<br>Student Assessment History | Spearman Rho correlation<br>Descriptive Statistics |
| 4. | What percentage of participating students remained on track with their peer cohort? | Cohort Status Reports<br>Student Transcript | Descriptive Statistics |

**Data Analysis**

Archival data were analyzed for student completion rates through EXCEL and Statistical Package for the Social Science (SPSS) software. The data were analyzed and compared for correlations using descriptive statistics and common measures of central tendency including mean, median, mode and standard deviation.

**Document review.** Four types of archival documents were analyzed in this program evaluation. Two district level documents include the course grade report and

student record collection report. Course grade reports provided a final letter grade for the summer course, as the school district does not archive numerical course grades. The school district provided one report for each of the four summers from 2015-2018. The reports consisted of student unique numerical identifier, gender, grade level, course name, and final letter grade. These data sets were instrumental in answering evaluation question two: *What percentage of participating students passed the summer online class and recovered the required course credit*?

The student record collection report provides demographic details. Each quarter during the school year, school districts in Virginia provide the state education department with this comprehensive record collection report. The last four years of reports were provided by the district to the researcher to provide demographic details on each summer participant. The demographic data consisted of student gender, socioeconomic status, disability status, English learner status, ethnicity, race, and course participation. The researcher merged student record collection data with course grade data to combine ethnicity, race, socioeconomic status, disability status, and English Learner status. This data was the primary source for evaluating question one: *What is the demographic profile of the students who have participated in this program?*

Two state level documents include student assessment history report and cohort status report. These documents are provided by the VDOE Single Sign-on for Web Systems. The researcher is a Virginia School District Account Manager and an authorized user of the state system. Student state assessment history includes SOL test results. The researcher requested an individual report from the Single Sign-on for Web Systems for each summer participant. This data set along with the district course final

grade report contributed to the analysis of evaluation question 3: *What is the relationship between participating students' course grades and their Standard of Learning Test Scores*?

The state cohort status report is provided for years 2015-2018. The data set in this report included student ninth grade entry year, expected graduation year, and cohort status. These data provide cohort status prior to summer participation and cohort status following summer participation. The data were disaggregated in Excel by percentage of students that did or did not remain on track with their cohort for on-time graduation. The researcher reviewed each student individually using this document to answer evaluation question four: *What percentage of participating students remained on track with their peer cohort*?

**Descriptive statistics.** Descriptive statistics are mathematical techniques for organizing and summarizing data. This program evaluation used Microsoft Excel 2016 to analyze the data obtained from each source. Online course completion data including numerical unique student identifier, course name, and final grade were obtained from the school district in Excel spreadsheet, one for each summer. Student demographic information from the school district State Record Collection reports in Excel were merged into the online course document. Descriptive statistics were used to answer the four evaluation questions.

**Spearman's Rho.** The statistical procedure used to determine correlation was a Spearman's Rho. It is a non-parametric test used to measure the strength and direction (positive or negative) of association or relationship between two ranked variables. For this particular study, the final course grades (A, B, C, D, and F) are indicators of the

quality of a student's performance and are an ordinal level of measurement. The standard of learning test scores range from 200 to 600 and function as an interval scaled value. Both final course grade and SOL score are ranked variables. The value $r_s = 1$ means a perfect positive correlation and the value $r_s = -1$ means a perfect negative correlation. This test was performed in SPSS to address evaluation question number three. *What is the relationship between participating students' course grades and their Standard of Learning Test Scores*? The Spearman's rho correlation is appropriate for this particular question because the researcher was interested in looking at the association between the two scores instead of making statements about causality or determining which variable causes the other to change.

**Assumptions, Delimitations, and Limitations**

**Assumptions.** Assumptions in research are those items that are a requirement for the program evaluation to be relevant. The underlying assumption of this program evaluation was that the archival extant data sources from the school district and state were reported consistently and accurately.

**Delimitations.** The delimitations are choices the researcher made during the study and include the following:

1. The program evaluation of summer online credit recovery does not aim to evaluate the course software used in the program.
2. The program evaluation does not aim to evaluate teacher effectiveness in the program.
3. The program evaluation does not aim to evaluate student motivation in the program.

4. This study does not include students who participate in online credit recovery courses during the school year.
5. This study combines data for three high schools in one school district
6. This study combines four years of summer credit recovery into one data set

**Limitations.** Limitations of a study are external factors outside of the control of the researcher and include the following:

1. The results of this program evaluation are not generalizable.
2. The results includes student achievement data from four years of summer school. The cohort status data were taken from VDOE cohort reports, which is a continually updating system from one semester to the next. Students reported to be on-track for on-time graduation at the end of the program evaluation could likely be off track by the next semester, depending on most current grades, and vice versa.
3. Another limitation includes data on verified credits. If a student earns the verified credit, one cannot assume it was solely because of alignment of the online learning program. The student had received previous direct instruction in a traditional classroom before completing the online course. The student will only re-take the SOL test if they previously failed the SOL after the traditional course. Per VDOE guidelines, students are not allowed to retake SOL tests to improve their score (VDOE, 2017).
4. This study combines data across four years and includes three high schools in one school district and does not include a control group.

## Ethical Considerations

This program evaluation plan was submitted to the Institutional Review Board (IRB) at the College of William & Mary. The program evaluation was found to comply with appropriate ethical standards and determined to be exempt from formal review under DHHS Federal Regulation 45CFR46.101.b.4. This policy exempts from formal review educational tests results that are existing documents and archival sources that can be manipulated by the researcher in a manner that subjects cannot be identified.

### Program Evaluation Standards

The Joint Committee on Standards for Educational Evaluation, supported by 17 professional organizations in North America, has revised 30 standards that support the core attributes of evaluation quality (Joint Committee on Standards for Educational Evaluation, 2011). The four areas that must be addressed prior to this evaluation are the Program Evaluation Standards core attributes of utility, feasibility, propriety, and accuracy (Yarbrough, Shulha, Hopson, & Caruthers, 2011).

**Propriety.** Ethical considerations are part of Propriety Standard 3, Human Rights and Respect. This standard asserts that evaluations should be designed and conducted to protect human and legal rights and maintain the dignity of participants and other stakeholders (Yarbrough et al., 2011). This program evaluation utilized Stufflebeam's (2007) product component of the CIPP model. The evaluator will not disclose student names or other identifying information, combine three high schools' data across four years of participation to further protect student information.

This evaluation was performed for school district administrators to determine the level of success the online summer program is having in helping students remain on track

to graduate. The Coordinator of Accountability and Assessment who is not involved in the implementation of the program but is responsible for district data collection and state reporting conducted this evaluation. The measures by which the intended outcomes of the program are being met have eliminated the possibility of bias in the data analysis.

**Utility.** The program evaluation was implemented to determine the demographic profile of participating students, the relationship between final course grades and state test scores, and level of student success in recovering the credit and getting back on track for on-time graduation. School district leaders will use the evaluation results to improve the program in an effort to make it more successful for students.

**Feasibility.** While there are ample data sources to determine what extent the program is meeting its intended outcomes, evaluation at this level has not been possible due to limited resources within the district. While the school district previously housed student final grades at the completion of each summer, the district does not have a department of program evaluation or student information system that can analyze the date and combine district reports with state reports.

**Accuracy.** This summative program evaluation includes quantitative school district and state level data. School level data includes demographic profiles and course pass rates per subject. State level data includes SOL pass rates and cohort status reports. The overall goal of this research is to provide information to educators that will assist them in the planning and implementation of a successful credit recovery program.

## Summary

This chapter provided information regarding the procedures and methods that were used to collect and analyze data in this program evaluation. This chapter included a restatement of the purpose of this study. Details of the participants, data sources, data collections and analysis were explained. Finally, ethical standards followed by the researcher, including the program evaluation standards that were adhered to in this study.

# CHAPTER 4

## Findings

The purpose of this evaluation was to determine the extent to which the summer credit recovery program is meeting the intended short-term outcomes. A program evaluation measured the extent to which the program is meeting its immediate outcomes. The Context, Input, Process, Product (CIPP) model focused on product evaluation. "Evaluation is the systematic process of delineating, obtaining, reporting, and applying descriptive and judgmental information about some objects' merit, worth, probity, feasibility, safety, significant, or equity" (Stufflebeam & Shinkfield, 2007, p. 698). Data sources used in this program evaluation included a review of archival documents spanning four years of summer credit recovery (e.g., demographic data, student course grades, student test scores, and student cohort status). Chapter 4 presents the results of analysis run on each data set obtained, presented in sections by each research question investigated.

**Evaluation Question 1: What is the demographic profile of the students who have participated in this program?**

The research findings are presented using descriptive statistics including frequency and percentages. The sample consisted of 252 students and represents participation in the summer online credit recovery program from 2015 to 2018. A detailed overview of the demographic profile is presented in Table 3.

Table 3

*Demographic Profile of Student Participation in Summer Credit Recovery*

| | Descriptive Statistics | |
|---|---|---|
| Demographic | *n* | % |
| Gender | | |
| Male | 169 | 67.1 |
| Female | 83 | 32.9 |
| Socioeconomic Status | | |
| Economically Disadvantaged | 144 | 57.1 |
| Not Eligible | 108 | 42.9 |
| Disability Status | | |
| Student with a Disability | 85 | 33.8 |
| Not Eligible | 167 | 66.2 |
| English Learner Status | | |
| English Learner | 4 | 1.6 |
| Not Eligible | 248 | 98.4 |
| Ethnicity | | |
| Hispanic | 15 | 6.0 |
| Not Hispanic | 237 | 94.0 |
| Race | | |
| American Indian or Alaska Native | 2 | .8 |
| Asian | 3 | 1.1 |
| Black | 130 | 51.6 |
| Two or more races | 12 | 4.8 |
| White | 102 | 40.5 |
| Other | 3 | 1.1 |

Male participation outnumbered female as 67% of the students were male and 33% were female. Students with a disability comprised 34% of participants while less than 2% of participants were English Learners; 57% of the students were economically disadvantaged. In terms of ethnicity, 6% of the population is Hispanic. In the race variable, Black students comprised the largest sample at 52%, followed by White students at 41%. Other races are represented in single digits.

Enrollment in mathematics and English courses comprised over 70% of overall enrollment. Mathematics enrollment was overall highest at 43% while English course enrollment was 30%. Participation in social studies (17%) was higher than science (9%).

Table 4

*Course Enrollment in Summer Online Credit Recovery*

| | Enrollment | |
|---|---|---|
| Course Name | *n* | % |
| English 9 | 22 | 8.7 |
| English 10 | 29 | 11.5 |
| English 11 | 24 | 9.5 |
| English 12 | 1 | .3 |
| Algebra I | 55 | 21.8 |
| Algebra II | 12 | 4.8 |
| Geometry | 43 | 17.0 |
| Biology | 10 | 4.0 |
| Earth Science | 13 | 5.2 |
| World History I | 6 | 2.4 |
| World History II | 13 | 5.2 |
| World Geography | 12 | 4.8 |
| Virginia and United States History | 9 | 3.6 |
| U.S. Government | 3 | 1.1 |

**Evaluation Question 2: What percentage of participating students passed the summer online class and recovered the required course credit?**

Final course letter grades from participating students spanning four years measured student performance in summer online credit recovery. The school district had 252 students take an online summer class and 196 students received a passing grade (77.8%). Approximately 56 students received a failing grade (22.2%). Table 5 shows the frequency and percent of students that passed or failed a summer online credit recovery course from summer 2015 through summer 2018.

Table 5

*Frequency Distribution of Students Passing and Failing a Summer Course*

| | Descriptive Statistics | |
|---|---|---|
| Variable | *n* | % |
| Students who passed a course | 196 | 77.8 |
| Students who failed a course | 56 | 22.2 |
| Total | 252 | 100.0 |

When the researcher changed the dependent variable to a number grade (A = 4, B = 3, C = 2, D = 1, F = 0), the resulting mean score for all students taking an online credit recovery course was 1.61, which equates to a letter grade of D+. The researcher then only considered students who received a passing grade in the summer course to calculate the mean score of students who passed. The mean score for all passing students was 2.07, which equates to a letter grade of C.

Participation in summer online credit recovery and pass rate varied across course content. Mathematics had the highest enrollment of 86 students (44.0%), followed by English enrollment of 64 students (33.0%), social studies enrollment of 33 students (17%), and science enrollment of 13 students (6.0%). Table 6 illustrates the course content participation rate and corresponding content pass rate.

Table 6

*Course Content Participation and Pass Rate*

| Course | | Participation Rate | Pass Rate |
|---|---|---|---|
| | *n* | % | % |
| English | 64 | 33.0 | 87.8 |
| Mathematics | 86 | 44.0 | 81.3 |
| Social Studies | 33 | 17.0 | 71.9 |
| Science | 13 | 6.0 | 56.9 |

Eighty-eight percent of all students who participate in an English course passed, followed by mathematics courses at 81%. Students passed social studies courses at the rate of 72%, higher than the science pass rate of 57%. Looking at specific courses within each content, English 10 had the highest enrollment and highest pass rate of 86%, followed by English 11 at 83%, English 9 at 81%, and a 100% pass rate for one student in English 12. Algebra II pass rate of 92% was higher than the Algebra I pass rate of 78%. The geometry pass rate was 74%. Table 7 illustrates course participation and pass rate for each summer course.

Table 7

*Percentage of Students Passing Each Online Summer Course*

| | Descriptive Statistics | |
|---|---|---|
| Course | *n* | % |
| English | | |
| English 9 | 18 | 81.8 |
| English 10 | 25 | 86.2 |
| English 11 | 20 | 83.3 |
| English 12 | 1 | 100 |
| Math | | |
| Algebra I | 43 | 78.0 |
| Algebra II | 11 | 91.6 |
| Geometry | 32 | 74.4 |
| Science | | |
| Earth Science | 7 | 53.8 |
| Biology | 6 | 60.0 |
| Social Studies | | |
| World History I | 6 | 100 |
| World History II | 11 | 84.6 |
| World Geography | 9 | 75.0 |
| Virginia and United States History | 6 | 66.6 |
| U.S. Government | 1 | 33.3 |

Approximately 56 students received a failing grade in the summer course (22.2%). Table 8 shows the frequency and percent of students that failed a summer

course by demographic detail. Males who failed the summer course outnumbered females as 55.3% of the failing students were male and 44.7% were female. Most students who failed summer courses are represented among multiple subgroups: 75% of students who failed the summer course were economically disadvantaged; students with a disability comprised 35.8% of the course failures; 50% of the students classified as English Learner failed the summer course; 33% of students with Hispanic ethnicity failed the summer course.

Table 8

*Demographic Profile of Student Course Failure in Summer Credit Recovery*

| | Descriptive Statistics | |
|---|---|---|
| Demographic | n | % |
| Gender | | |
| Male | 31 | 55.3 |
| Female | 25 | 44.7 |
| Students within Multiple Subgroups | | |
| Economically Disadvantaged, Black | 13 | 23.2 |
| Economically Disadvantaged, White | 9 | 16.0 |
| Economically Disadvantaged, Student with a Disability, Black | 13 | 23.2 |
| Economically Disadvantaged, Student with a Disability, White | 3 | 5.3 |
| Economically Disadvantaged, Student with a Disability, English Learner, White | 1 | 1.8 |
| Economically Disadvantaged, Student with a Disability, Hispanic, Black | 2 | 3.6 |
| Economically Disadvantaged, English Learner, Hispanic | 1 | 1.8 |
| Economically Disadvantaged, Hispanic | 1 | 1.8 |
| Student with a Disability, White | 2 | 3.6 |
| Black | 3 | 5.3 |
| White | 7 | 12.5 |
| Hispanic, American Indian or Alaskan Native | 1 | 1.8 |

**Evaluation Question 3: What is the relationship between participating students' course grades and their Standard of Learning Test Scores?**

A Spearman's rho rank order correlation was computed in SPSS to determine if there was a relationship between the students' final course grade and the corresponding SOL test score. Spearman's correlation is similar to Pearson's correlation in that both procedures calculate the strength and direction of the association between two variables. The difference is that while Pearson correlation requires the use of two continuous variables, Spearman's correlations examines differences in ranks of observations other than numeric values. Course final grades are provided as letter grades while standard of learning test scores are numerical.

Based on the results of the study, Table 8 below illustrates there is no correlation between the two variables, final course grade and accompanying SOL test score, $r_s = .019$, $n = 110$, $p = ns$.

Table 9

*Correlation of Final Course Grade and SOL test score*

| | | Grade | SOL Test |
|---|---|---|---|
| Final Grade | Correlation Coefficient | 1.000 | .019 |
| | Sig. (2-tailed) | | .847 |
| | N | 110 | 110 |
| SOL Test | Correlation Coefficient | .019 | 1.000 |
| | Sig. (2-tailed) | .847 | |
| | N | 110 | 111 |

*Note.* SOL = Standards of Learning

The passing score for the Virginia SOL tests is 400 based on a reporting scale that ranges from 0 to 600. A scaled score of 0 to 399 means a student did not pass a test. A pass advanced score is 500 and above and a perfect score is 600. Student scores after

participation in the summer program ranged from 322-437. While 78% of overall summer credit recovery enrollment was in SOL tested courses, only 23% of students passed their accompanying SOL test. Table 9 illustrates standard of learning test results per summer credit recovery course.

Table 10

*Standards of Learning Test Results*

| | Previous Pass | | SOL Test | |
|---|---|---|---|---|
| Course | *n* | % | *n* | Mean |
| English | | | | |
| English 11 | 11 | 45.8 | 9 | 371 |
| Math | | | | |
| Algebra I | 5 | .09 | 41 | 375 |
| Algebra II | 3 | 25.0 | 8 | 387 |
| Geometry | 1 | 23.2 | 25 | 360 |
| Science | | | | |
| Earth Science | 4 | 30.7 | 6 | 383 |
| Biology | 1 | 10.0 | 5 | 384 |
| Social Studies | | | | |
| World History I | 1 | 16.6 | 3 | 353 |
| World History II | 2 | 15.3 | 5 | 348 |
| World Geography | 6 | 50.0 | 4 | 382 |
| Virginia and U.S. History | 4 | 44.4 | 5 | 386 |

*Note.* SOL = Standards of Learning

Students who did not participate in SOL testing after completing the summer course because they had previously passed the SOL test in their initial course made up almost 20% of enrollment in summer courses; 24% of students did not participate in SOL testing after summer participation for unknown reasons.

**Evaluation Question 4: What percentage of participating students remained on track with their peer cohort?**

Eighty-seven percent of students (220 out of 252) remained on track for on-time graduation with their peer cohort following participation in the summer online credit

recovery program. Of the 32 students who did not remain on track with their peer cohort, 91% of those students were repeating ninth or 10th graders. Eighty four percent of the students (29 out of 32) were not on track after summer 2015 and summer 2016 participation, before the district initiated a mandatory summer attendance policy. The most significant commonality of students not on track was the higher percentages of economically disadvantaged (69%), students with disabilities (38%), and Black students (56%), compared to the overall participation demographic. Cohort status reports indicated 122 students in the school district had dropped out of high school over the past four years; none participated in the program.

**Summary**

A collection of numerous school district and state archival data provided student course completion and assessment rates. These data along with a demographic profile for each student provided evidence to support who is participating in the program and the extent to which the summer online credit recovery program is meeting the immediate outcome of participants remaining on track with their peer cohort for on-time graduation. The data also provide information about factors that contribute and possibly inhibit student's success in the program. With the results above, this program evaluation revealed that online learning is effective as a credit recovery tool and the program is meeting its short-term outcomes. Chapter 5 will discuss recommendations based on these findings.

# CHAPTER 5

## Recommendations

The national concern for graduation and dropout rates is well documented as a critical social problem in our country that has roots in the economy as well as long-term life consequences. The grim implication of dropping out of high school with limited academic skills and credentials significantly limit an individual's economic and social advancement throughout the remainder of their working lives (Rumberger, 1987). Dropouts are eight times more likely to be in jail or prison as high school graduates and are more likely to be unemployed, in poor health, living in poverty, on public assistance, or single parents with children who drop out of schools (Bridgeland et al., 2006). Limited job placement, increased substance abuse, increased reliance on government assistance, and incarceration are common characteristics associated with high school dropouts (Rumberger & Lim, 2008).

School districts across the country are recognizing the need for accelerated online credit recovery programs that allow students to quickly recover failed course credits and keep the student on track for high school graduation. Watson and Gemin (2008) indicated the extensive implementation and big business of online leaning nationally and globally. Ample research exists on the effectiveness of online learning but most of that research centered on students in advanced placement courses or enrolled in higher education.

There is significantly less research on online learning at the high school level and very little research specifically on online learning for high school credit recovery.

The purpose of this study was to conduct an evaluation of a summer online credit recovery program being implemented for three high schools in a Virginia school district. The Context, Input, Process, Product (CIPP) model of program evaluation framed this study and guided the four evaluation questions (Mertens & Wilson, 2012; Stufflebeam & Shinkfield, 2007). Using the CIPP model, the study sought to evaluate the success of the program intended outcomes of credit recovery, verified credit attainment, and on-track for on-time graduation. An ex post facto non-experimental research approach was used with four years of program data. Findings from the study are discussed and recommendations for the program are provided in this chapter.

**Discussion of Findings**

The program theory assumes that if the school district offers the summer online credit recovery program, then students will recover credits needed for graduation. If students recover those credits in a timely manner, the student is more likely to remain on track with their peer cohort and graduate on time, within four years of entering ninth grade for the first time. Quantitative indicators provided evidence of the extent to which the short-term outcomes of the summer online credit recovery program are being met. The short-term outcomes of the program included credits earned, SOL pass rates, and on-track for on-time graduation.

**Credits earned.** Archival student grade reports provided quantitative data for number of credits earned by each student in the program. Results indicate that the program is meeting substantial results as 77% of students passed their summer online

credit recovery courses and earned their course credit requirement for graduation. Based on the frequency counts, students passed English courses at the highest rate of 87%. Math courses are passed at a rate of 81%. Social studies courses are moderately successful with a pass rate of 71%. Science enrollment is low, only 6% of students take a science class and the course pass rate is lowest of all content at 56%.

**SOL pass rates**. Data analysis indicated this intended short-term outcome is unsuccessful. Of the 252 students that participated in summer credit recovery, 110 took SOL tests in summer or fall following summer course completion. Based on the results of the study, there is no correlation between the two variables final course grade and SOL test score. Further descriptive statistics revealed this short term intended outcome is not being met. Only 23% of students passed their accompanying SOL test following course completion. Frequency counts and mean distribution revealed an average failing score for every core content SOL test.

**On-track for on-time graduation**. Student cohort and dropout status was analyzed to determine the level of success following participation in the program. Eighty seven percent of students remained on track for on-time graduation with their peer cohort following participation in the summer online credit recovery program, indicating the program is meeting this intended short-term outcome. Ninety one percent of students not on track following participation in the program were repeating ninth and tenth graders.

## Recommendations for Summer Online Program

The data analysis process of this program evaluation revealed several findings related to the program that school district leaders would find relevant when considering ways to improve and when planning for the summer online credit recovery program.

The findings and recommendations of the program evaluation are presented in Table 9.

**Eliminate Barriers to summer program participation and student success**

The findings of this study indicate the overall program is successful 77% of participants and therefore has the potential to increase course recovery for all students. There are several potential barriers to summer credit recovery participation based on the inputs of the program and demographic details of participants. Barriers to participation may include lack of knowledge about the existence of the program, lack of student transportation to the program and unavailable meals in the summer session. Barriers to student success may include insufficient teacher coverage and support.

Students classified as economically disadvantaged account for 57.1% of student participation in the summer program. This finding supports the literature presented in Chapter 2 that many at-risk students and high school dropouts hail from lower socioeconomic backgrounds (Bridgeland et al., 2006). Although the program is free to students with free or reduced-price meals, transportation nor meals are provided in summer. While students may take city bus transportation to the summer school site, they may have to make several transfers depending on the distance from home to school. The district should consider the potential impact of providing transportation and meals for students in the program.

Students with disabilities account for 33.8% of overall summer participation, more than double the overall district demographic of 15.4%. The school district should consider ensuring sufficient special education teacher coverage and support for students in the summer program. Currently, the district employs one special education teacher each summer but that number may be insufficient in order to provide adequate special

education services and accommodations given that over one-third of participants are students with a disability.

Black students account for 51.6% of participation, almost three times the overall district demographic of 17.4%. The school district should closely monitor and support Black students in course completion throughout the school year. Further research would include looking closely at discipline data that could indicate higher suspensions or out of class consequences that are negatively affecting Black student performance during traditional course participation.

The school district should examine the student recruitment process, as none of the dropouts over a 4-year period participated in summer credit recovery. Additionally, English Learner participation in the program is significantly low. The English Learner participation rate of 1.6% is considerably lower than the overall district demographic of 6.1% and is not comparable with the school district on-time graduation rate of 50% for English Learners in cohort 2018. The pass rate for English Learners in summer courses is 50%. Students classified as Hispanic and English Learner also share a 50% pass rate. The findings support Rumberger and Lim's (2008) report that almost half of Hispanic students failed to graduate high school. The school district should increase student and family outreach and communication about the program. It is important to include all stakeholders, especially English Learner teachers, specialists, and parents to increase awareness of the summer program as well as participation in and support of the program.

**Evaluate science online content and science support**

Overall, 77% of students passed their summer online credit recovery course. English (87.8%) and math (81.3%) course pass rates were more successful than social

studies (71.9%). The science courses had a pass rate of 56.9% so the school district would be wise to review and evaluate the alignment of the online content and student performance within various sands to determine possible areas of concern in the online platform. Further evaluation of the summer pacing guide is recommended.

The school district should determine that all staff are effective in supporting students who participate in the program. The school district employs one teacher for each content in the summer program regardless of enrollment. Science enrollment is lowest and has the highest student to teacher ratio but the lowest pass rate, so evaluation of teacher effectiveness and support in science is recommended. The district should ensure the science teacher is certified to teach both earth science and biology. Best practices in online learning indicate teachers should be available for technical assistance as well as academic assistance, providing a blended learning approach (Robertson et al., 2012; Watson & Gemin, 2008). Finally, the school district could explore additional modifications to the online content as well as possible interventions that support students enrolled in science courses.

Table 9

*Program Evaluation Findings and Recommendations*

| Evaluation Question | Findings | Recommendation |
|---|---|---|
| 1. What is the demographic profile of the students who have participated in this program? | Summer program demographic profile is not reflective of the overall school district demographic profile<br><br>Economically Disadvantage 57.1%<br>Black Students 51.6%<br>Students with Disabilities 33.8%<br>English Learners 1.6% | The school district should eliminate barriers to summer participation and student success. |
| 2. What percentage of participating students passed the summer online class and recovered the required course credit? | Overall Pass Rate 77%<br>English 87.8%<br>Mathematics 81.3%<br>Social Studies 71.9%<br>Science 56.9% | Revaluate science online content and science teacher support. |
| 3. What is the relationship between participating students' course grades and their Standard of Learning Test Scores? | There is no correlation between student course grades and SOL test scores and only 23% of students passed their SOL test. | Provide SOL test preparation prior to SOL test. |
| 4. What percentage of participating students remained on track with their peer cohort? | 87% of participating students remained on track for on time graduation with peer cohort.<br><br>Students who have dropped out of school did not participate in the summer program. | Implement a comprehensive evidence based dropout prevention program |

*Note.* SOL = Standards of Learning

### Provide a Test Preparation Session Prior to SOL Testing

Although there was no correlation between final course grade and SOL test score, only 23% of the students passed their SOL test following course completion. It is recommended that the school district consider implementation of a test preparation or SOL boot camp to better prepare students for the corresponding state test. The online program provides pre-assessment to determine mastery in order for the student to focus on un-learned content. While this structure aids in accelerating the student through the content much faster than face-to-face traditional instruction, the students may not be acquiring the broad overview and review of the entire course content that would better prepare them for a summative state test. It is also recommended that students participate in the state test immediately after completing the summer course. In previous years, many students did not take the state test until the following fall, placing them further away from the course content.

### Implement a Comprehensive Evidence Based Dropout Prevention Program

Data analysis indicated that 87% of summer credit recovery participants met the short-term objective of remaining on-track for on-time graduation, a strong indicator of meeting the short-term objective of the program. Evaluation of the cohort status reports indicate that none of the school district's 211 dropouts over a 4-year period attended the program from summer 2015 to summer 2018. While it appears the large majority of students who participate in program are successful in recovering course credit, a large majority of students at risk of dropping out of school are not participating in the program. Identification in the beginning of the high school career for students at risk of dropping out of school is critical to establish early support interventions (Balfanz et al., 2004;

Rumberger & Lim, 2008). The Institute for Education Sciences collaborated with the What Works Clearinghouse to create Preventing Dropout in Secondary Schools Practice Guide. The guide provides four evidence-based recommendations the school district could utilize as a guide to develop a dropout prevention program:

1. Monitor the progress of all students, and proactively intervene when students show early signs of attendance, behavior, or academic problems.
2. Provide intensive, individualized support to students who have fallen off track and face significant challenges to success.
3. Engage students by offering curricula and programs that connect schoolwork with college and career success and that improve students' capacity to manage challenges in and out of school.
4. For schools with many at-risk students, create small, personalized communities to facilitate monitoring and support. (What Works Clearinghouse, 2017, p. 1)

**Implications for Education**

As previously outlined in the literature, while use of online learning is expanding tremendously in K-12 education, few rigorous research studies exist on the effectiveness of online learning for high school students. Even less research is available on online credit recovery. While this study hopes to add to the discussion of such programs, preventing the need for such programs should be at the forefront of all public school educators. In order for at risk youth to enter high school with a strong support system, school districts should be incorporating research based early warning systems and dropout preventions programs and initiatives that support students. Intensive support and

monitoring are critical during the freshman year of high school (Balfanz et al., 2004 Rumberger & Lim, 2008.

**Recommendations for Future Research**

The purpose of this program evaluation was to determine the extent to which the summer online credit recovery program is effective in meeting its immediate outcomes. Based on a review of the available literature and analysis obtained from the study, four recommendations are made for future research related to the effectiveness of online credit recovery:

1. While this evaluation sought to track intended short-term outcomes of the program, it is important to gather student perspective on the inputs and processes related to the program. This will inform school district on how to improve planning and implementation of the program to increase student outcomes.

2. Online credit recovery programs will benefit from further evaluation on teacher support and professional development surrounding the program and at-risk learners. Survey of teacher perspectives on these areas could inform school districts on how to improve teacher preparedness and increase student outcomes.

3. Research shows that the beginning of high school is a critical time for students and that identification of high school students at risk of dropping out should be identified during their first semester of high school. Further evaluation of school district programs to identify and provide effective targeted intervention to prevent students from needing credit recovery should be the ultimate goal.

4. Finally, given the relatively small sample size of three high schools and the use of one online content provider, a larger study at a region or state level with multiple

school districts and multiple online providers would significantly broaden the scope of data and be better suited to generalizable results. Results could allow for comparisons of successful characteristics of various online credit recovery programs.

**Conclusion**

The purpose of this program evaluation was to determine the extent to which the program is meeting the intended short-term outcomes. The program theory states that students who participate will pass the course, the SOL test, and remain on track for graduation. Specifically, the program sought to determine the demographic profile of summer participants, the course pass rate, the relationship between the final grade and the SOL test score, and percentage of participating students remaining on track with their peer cohort for on-time graduation.

The study analyzed four years of post ex facto data. The findings show a relatively high rate of participation of economically disadvantaged, special education, and Black students. Participation of English Learners is very low and helps to explain why the district had 50% English Learner dropout rate in 2018. None of the students who dropped out of school over a four-year period in the school district participated in the summer program. The results of this study indicate the online credit recovery program is an overall effective instructional method for students in need of recovering failed credits. Results show significant success for students enrolled in English and math courses, a marginal level of success for social studies courses, and a low level of success for science courses. There was no correlation between final course grade and accompanying SOL test, and students are only passing the SOL test at a rate of 23%. Ultimately, student participation in the summer online credit recovery program proved 77% likely to recover

failed course credits and keep students on-track for on-time graduation. By eliminating barriers to participation, reevaluating online content and teacher support, providing SOL test preparation, and implementing a comprehensive evidenced based dropout program, the summer program has the potential to be effective for all students.

# Appendix

## Institutional Review Board Approval

**Subject:**
STATUS OF PROTOCOL EDIRC-2018-12-19-13310

**Message:**
This is to notify you on behalf of the Education Internal Review Committee (EDIRC) that protocol EDIRC-2018-12-19-13310-mfdipa titled An Evaluation of an Online High School Summer Credit Recovery Program to Maintain Virginia On-Time Graduation has been EXEMPTED from formal review because it falls under the following category(ies) defined by DHHS Federal Regulations: 45CFR46.101.b.4.

Work on this protocol may begin on 2019-01-01 and must be discontinued on 2020-01-01.

Should there be any changes to this protocol, please submit these changes to the committee for determination of continuing exemption using the Protocol and Compliance Management application (https://compliance.wm.edu ).

Please add the following statement to the footer of all consent forms, cover letters, etc.:

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM & MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2019-01-01 AND EXPIRES ON 2020-01-01.

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## Vita

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| 2002-2004 | Master of Science in Education<br>Special Education<br>Old Dominion University<br>Norfolk, VA |
| 1987-1991 | Bachelor of Arts in Business Management and Economics<br>Emory and Henry College<br>Emory, VA |

EXPERIENCE:

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|---|---|
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