2019

The Effect of a 21st Century Community Learning Center Grant on Academic Progression, Attendance, and Disciplinary Incidents of At-Risk Students at a High School in Rural South Carolina

Adam Lanford

THE EFFECT OF A 21ST CENTURY COMMUNITY LEARNING CENTER GRANT ON ACADEMIC PROGRESSION, ATTENDANCE, AND DISCIPLINARY INCIDENTS OF AT-RISK STUDENTS AT A HIGH SCHOOL IN RURAL SOUTH CAROLINA

By
Adam Lanford

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2019

Approval Page

This dissertation was submitted by Adam Lanford under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

_____	_____
Laura Boyles, Ph.D. Committee Chair	Date
_____	_____
Stephen Laws, Ed.D. Committee Member	Date
_____	_____
Michael Cory, Ed.D. Committee Member	Date
_____	_____
Prince Bull, Ph.D. Dean of the School of Education	Date

Abstract

THE EFFECT OF A 21ST CENTURY COMMUNITY LEARNING CENTER GRANT ON ACADEMIC PROGRESSION, ATTENDANCE, AND DISCIPLINARY INCIDENTS OF AT-RISK STUDENTS AT A HIGH SCHOOL IN RURAL SOUTH CAROLINA. Lanford, Adam, 2019: Dissertation, Gardner-Webb University.

This quantitative research study was designed to examine the impact of a 21st Century Community Learning Center afterschool program on students identified as at risk. The research study focused on three research areas. First, the study examined the number of Carnegie credits earned during the 2017-2018 school year. Second, the research studied the number of school days absent during the 2017-2018 school year. Finally, the study reviewed the number of disciplinary incidents that required administrative intervention during the same school year. The study utilized a chi-square test of homogeneity to determine if there was a statistically significant difference between at-risk students who attended the program and those who did not in the area of academic progression, attendance, and disciplinary incidents for the 2017-2018 school year at a rural high school in South Carolina. Analysis found there was no statistically significant differences in academic credits earned, attendance, or disciplinary incidents between the two groups of students.

Keywords: 21st Century Community Learning Center, at-risk students, afterschool program, high school

Table of Contents

Tables

Figure

Chapter 1: Introduction

The Adjusted Cohort Graduation Rate (ACGR) for United States public high school students at the end of the 2014-2015 school year was 83%. This percentage marked the highest rate public high school students had attained since the AGCR measure began in 2010-2011. The ACGR measures the percentage of first time ninth graders in public high school who graduate with a regular high school diploma within 4 years from beginning the ninth grade. Even though the rate has increased across all students, there was variance between different racial and ethnic groups. For the 2014-2015 school year, Asian/Pacific Islander students had a 90% graduation rate, while White students had a graduation rate of 88%; Hispanic students were at 78%; Black students graduated at 75%; and finally, American Indian/Alaska Natives graduated at 72% (National Center for Education Statistics, 2016). Much time, effort, and resources have been allocated to increase the likelihood that American students will earn their high school diploma or GED. Because of the changing job market, students who do not finish high school face difficult circumstances individually while also creating the likelihood to increase costs for society at large. Students who complete high school will earn approximately 12% more per year than those who do not graduate (French, Homer, Popovici, & Robins, 2015).

When comparing geographic regions, the Southern United States had a status dropout rate of 7.6%, higher than any other region in the United States. Hispanics had an 11.8% status dropout rate and Blacks had a 9.0% dropout rate, which was a much higher rate of status dropouts than the White and nominal Asian/Pacific Island population at both the national and southern geographic level. There is also a statistical difference

when comparing socioeconomic status and the education level achieved by parents. The students in the lowest quintile of socioeconomic status or whose parents had the lowest attainment of education are much less likely to finish the requirements for a high school credential than those members of higher quintiles (McFarland, Stark, & Cui, 2016).

When students do not attain a high school diploma, there are negative economic impacts on multiple levels. First, there is a private individual cost in terms of lost wages and earnings over time. Additionally, there are public and social costs in terms of lost taxes from wages as well as more costs for social support. According to a College Board research study, individuals with less than a high school diploma earn $27,200 per year on average, compared to $36,800 for individuals earning a high school diploma, $41,700 for people with some college education but no degree, and increasingly higher numbers for associate's, bachelor's, master's, and professional/doctoral degree earners per year (Ma, Pender, & Welch, 2016).

Historical Trends

The job market in the United States has changed dramatically over the last half century. With the advent of improved mechanization and technological innovations, the availability of jobs for unskilled, uneducated populations decreased dramatically.

> Fifty years ago, the nation could afford to lose large numbers of students before graduation because high school dropouts could still land well-paying jobs and support their families. But times have changed. Today, jobs that require relatively little education are increasingly done by machines or shipped overseas, and individuals who fail to earn a high school diploma are at a great disadvantage when it comes to finding a good-paying job. (Amos, 2008, p. 5)

Many researchers refer to the status dropout rate, the number of 16- through 24-year-olds who have not completed a high school program and are not currently enrolled. It has been gathered since the early 1970s, a much longer time period than the average cohort graduation rate. The status dropout rate has declined from 14.1% in 1973 to 6.8% in 2014. During this time period, there was not a constant downward trend. It would fluctuate with each new educational initiative; however, from 2003 to 2013, the percentage of employed persons who were status dropouts fell from 53% to 41%. When comparing the two statistics, it can be seen that more students completed high school than had previously, but fewer students who did not complete high school coursework were employed (McFarland et al., 2016).

While the status dropout rate did slowly decline over time since the 1970s, Averaged Freshman Graduation Rate, the number of students who received diplomas divided by the number of incoming freshmen 4 years earlier, remained relatively stagnant from the 1970s to 2007, when it began to grow as denoted in the Figure. According to DePaoli, Balfanz, and Bridgeland (2016), the rate rose over 10 percentage points between 2002 and 2015. The Figure also displays the ACGR, the percentage of public high school students who earn a diploma within 4 years of beginning ninth grade. This number increased over 4 percentage points from 79% to 83.2% from 2011 to 2015.

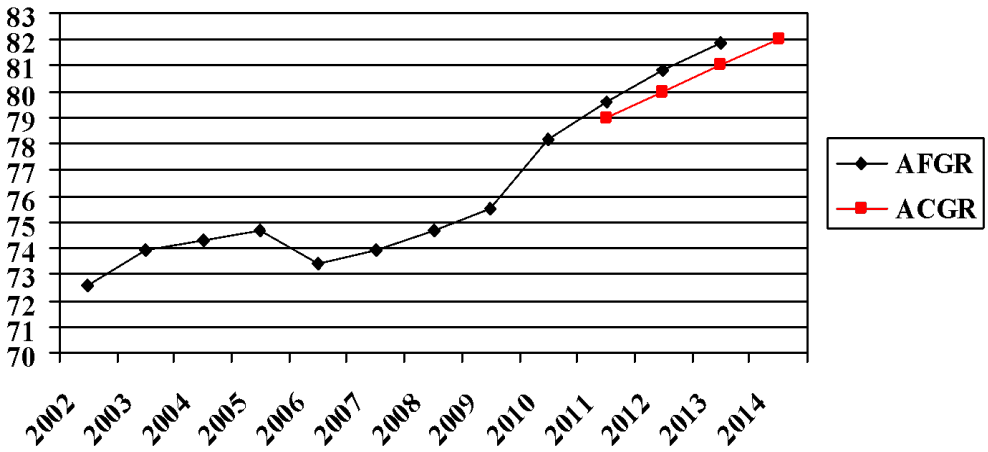

Figure. Trends in High School Graduation Rate: 2002-2014.

Trends in dropouts between different groups. Some improvement has been made regarding historically low-performing groups including Hispanic/Latino students, Black students, low-income students, and students with disabilities; but there is still a difference.

According to DePaoli et al. (2016), Black and Hispanic/Latino students increased their graduation rates the most: 9 percentage points for Blacks and 15 percentage points for Hispanic/Latino students between 2006 and 2012. Since the ACGR was implemented as the standardized national reporting rate in 2011, Blacks average a 1.5 percentage point growth per year, while the Hispanic/Latino graduation rate has an average 1.36 percentage points of growth per year. Both of those rates double the White growth rate of 0.72%, closing the overall graduation gap between these minority groups and the majority White group of students.

Another major indicator for high school graduation is family income status. In 2013, the status dropout rate for students from the lowest income quartile was 10.7%.

This rate is indeed higher than the other three quartiles, which stood at 8.8% for the low-middle group, 5.0% for the high-middle group, and 3.2% for the highest quartile of family income status. The gap between the lowest and the highest income group has come down 23.1% since 1973 (McFarland et al., 2016). At this time, only 20% of states had an ACGR above 80% (DePaoli et al., 2016).

DePaoli et al. (2016) identified five drivers of the national public high school graduation rate at the end of the 2014-2015 school year. They included low-income students, Black and Hispanic/Latino students, students with disabilities, English language learners, and low graduation rate high schools, which they termed dropout factories. Fifty-seven percent of the low graduation rate high schools, schools with at least 100 students and an ACGR below 67%, are located in cities.

The cost of "dropping out" of high school. According to the U.S. Department of Labor (2014), high school dropouts are unemployed at a higher rate when compared to those who have earned a high school credential. With income held constant, dropouts who are 25 or older reported being in worse health than people who did not drop out (Pleis, Ward, & Lucas, 2010). Moreover, high school dropouts are more likely to be incarcerated than those who complete high school, 36% to 6.4% (McFarland et al., 2016). Estimates have placed the cost incurred by taxpayers for students who drop out at $260,000 over the course of a lifetime. The costs include lost earnings, taxes, and productivity wages. In a quantitative study of high school completers, it was found that students who do not complete high school report being in worse health than those who do (McFarland et al., 2016). Students who do not complete high school will cost the federal government $13,000 over their lifetime, on average, versus high school completers in

terms of Medicaid and other social benefit costs. If high schools were able to eliminate the achievement gap between minorities and the White population in terms of graduation, it is estimated that $310 billion could be added to the United States economy (Amos, 2008). Not only has research shown that there is a strong positive correlation between high school grade point average (GPA) and college attainment, but there also exists a strong positive correlation between high school GPA and earnings in adulthood (French et al., 2015). Similarly, in a study of data from the College Board regarding the 2015 employment status of civilians aged 25 to 64, only 63% of people with less than a high school diploma were in the workforce, compared to 79% of high school graduates and 84% of college graduates (Ma et al., 2016).

Overview of 21st Century Community Learning Center (CCLC) Programs

Large scale publicly sponsored after-school activities are a relatively new phenomenon in education. These programs really only became a part of educational spending in the 1980s. There has been a concern for "door key" kids, students who come home from school with no adult caregiver present, noted as early as 1943 during the wartime effort as dads went to war and moms went to work (Alston, 2010). In the 1980s, burgeoning research was coming to the forefront regarding the issues faced in the hours after schools dismiss but prior to the time adults arrive at home. As of the late 1990s, "more than 28 million school age children have parents who work outside the home … an estimated five to seven million, and up to as many as 15 million 'latch-key children' return to an empty home after-school" (Pederson, De Kanter, Bobo, Weinig, & Noeth, 1998, p. 1).

The 21st CCLC program began in 1994 as Congress aimed to open up public schools in rural areas and inner-city areas for broader use by the community at large. The aim of the 21st CCLC program included social pursuits and academic improvement. Before this time, the federal government had little involvement in after-school programming, as most of the after-school programs were led by civic and social organizations such as the YMCA or Boy Scouts of America (Gayl, 2004). In 1998, the CCLC program was reauthorized to focus on academic achievement and got an even bigger economic boost under the No Child Left Behind Act of 2002. At this time, the program's aim was moved to focus on improving academic outcomes for low-income children, and the funding was increased dramatically (Gayl, 2004).

Table 1 contains the total number of students and regular attenders, basic demographic composition of the students, and age of the students served in the 21st CCLCs across the nation for the 2014-2015 school year. The vast majority of programs are at the elementary school level with minority groups encompassing over 70% of the students served through the program.

Table 1

2014-2015 Students Served in 21st CCLC

Total Students Attended	Regular Attenders[a]	% Black	% Hispanic
1.8 mil	752,008	66.7	2.1
% White	% Elementary	% Middle	% High
22.4	68.7	25.3	6.1

[a]Regular Attenders is defined by the number of students who attended the program for 30 days or more.

Federal guidelines. The 21st CCLC program was authorized under Title IV, Part B of the Elementary and Secondary Education Act as amended by the Every Student

Succeeds Act (2015; 20 U.S.C. §§ 7171-7176). According to the statute, the 21st CCLC program has three main areas in which to provide services:

> (1) provide opportunities for academic enrichment, including providing tutorial services to help students, particularly students who attend low-performing schools, to meet the challenging State academic standards.
>
> (2) offer students a broad array of additional services, programs, and activities, such as youth development activities, service learning, nutrition and health education, drug and violence prevention programs, counseling programs, arts, music, physical fitness and wellness programs, technology education programs, financial literacy programs, environmental literacy programs, mathematics, science, career and technical programs, internship or apprenticeship programs, and other ties to an in-demand industry sector or occupation for high school students that are designed to reinforce and complement the regular academic program of participating students; and
>
> (3) offer families of students served by community learning centers opportunities for active and meaningful engagement in their children's education, including opportunities for literacy and related educational development. (20 U.S.C. §§ 7171-7176, para. 2-4)

In 2002, the 21st CCLC program was restructured under the No Child Left Behind Act which allocated the funds to each state based on its Title I funds. From there, each state was tasked with awarding, implementing, and assessing grants at the state level (James-Burdumy et al., 2005). Since that time, states have been tasked with providing grants and overseeing the individual sites for compliance and performance.

State guidelines and resources. Because the 21st CCLC program is a federal grant program that was restructured for more state control, the state of South Carolina provides technical assistance and resources. They provide eligibility forms and sample applications as well as a master list of grantees. The state of South Carolina does require evaluation documentation including enrollment and attendance data and academic data as well as survey data to be entered onto the website for the yearly evaluation. They also provide budget templates, design, and periodical assessment support.

Statement of Problem

Students who do not complete high school have much more limited opportunities than their peers who complete high school. The focus of this study is the impact of an outside-of-school time (OST) program on the graduation rate of historically low-performing groups of students. There is a limited amount of quantitative data with regard to high school 21st CCLC programs as well as OST for high school students. There is modest support in broad terms in areas of program support and alignment but very little in terms of both small scale and large scale programming success. There is also limited research regarding OST programs for high school students and the impact on student academic progression.

Purpose of Study

The purpose of this study was to examine the impact of the 21st CCLC program at a high school in the northwest corner of the state of South Carolina in the areas of academic progression, attendance, and disciplinary infractions. Specifically, the study was intended to determine what the 21st CCLC program's impact is in those domains between at-risk students participating in the program and those at-risk students from the

same school who are not participating. This study will add to the current research base regarding OST programs for high school students and help to further the effectiveness of 21st CCLCs for the high school level. This study went beyond the annual quantitative reports required by state and federal mandates that are currently in place by comparing students in the program with similar at-risk students who do not attend the program.

Research Questions

1. Is there a difference in education progression between at-risk students participating in the 21st CCLC program and similar at-risk peers not participating in the program?
2. Is there a difference in school attendance between at-risk students participating in the 21st CCLC program and similar at-risk peers not participating in the program?
3. Is there a difference in disciplinary incidents during the school day between at-risk students participating in the 21st CCLC program and similar at-risk peers not participating in the program?

Educational progression, school attendance, and disciplinary incident rates are interconnected; and the performance of students in these three areas contributes to the likelihood that students will graduate from high school on time. Much research has been completed on the high school transition and importance of credit attainment in the first year of high school including freshman academies and transition coaches. Students who start high school earning at least five credits are more likely to complete high school diploma requirements than students who start their high school career with four or less credits (Roderick, Kelley-Kemple, Johnson, & Beechum, 2014).

Students in South Carolina are required to attain 24 Carnegie units to obtain a high school diploma. Students making adequate academic progress increase the chances of completing the requirements for the South Carolina high school diploma. Earning credits in the core subjects, especially English and math, increases the likelihood students will complete high school requirements on time.

Educational progression refers to the total number of Carnegie credits earned by students at the end of each academic year. The study compared total number of credits earned as opposed to a ratio of credits earned versus credits attempted. Considering a student in South Carolina has to earn 24 Carnegie units to graduate high school, the expected number earned per year is six. Students were compared by cohort group based on the total number of credits earned.

The classifying phrase "similar peers" refers to a distinct group of students within the entire school population. The first qualifier was students who were identified as at risk and attended the 21st CCLC program at the middle grades level and have not attended at the high school level. The second qualifying standard was students who have been identified as at risk to drop out of school prior to graduation and thus been referred or recommended to attend the 21st CCLC program and did not attend.

The attendance rate was calculated using the total days of school missed regardless of the reason or South Carolina state absence code. It was calculated based on daily number versus meeting attendance, meaning a student who was present for 50% of the day or more was counted present for the entire day. Meeting attendance was used to count each unit independently versus the daily rate. The interest of this study was full-day attendance, not attendance at certain classes.

Disciplinary incidents followed the local education agency's student handbook regarding classification. The incidents were categorized based on the level in which they fell on the district handbook, one through three, from least to most severe. Only incidents logged requiring in-school suspension (ISS) or out-of-school suspension (OSS) were included in the data. Minor procedural offenses, such as cell phone violations, were not included.

Setting. The selected school is located in the northwestern area of South Carolina in a single school district county. The county school district has 10 elementary/ intermediate school sites, three middle schools, three high schools, one career center, one alternative education center, and one adult education center. The district's student demographics are located in Table 2.

Table 2

Research District's Student Demographic Information

Population	Number of Students
Prekindergarten-Grade 5	5,218
Grades 6-8	2,442
Grades 9-12	3,006
Qualifying for Academically Gifted Services	1,676
Qualifying for Free/Reduced Lunch	5,866
American Indian/Multi-Racial	436
African-American	1,078
Asian	81
Latino	695
White	8,348

The attendance area of the school encompasses a city with a population of 8,102 with 4,076 housing units (United States Census, 2015) and the immediate surrounding area. It is the smallest and most densely populated attendance zone of the county's three high school areas. The school enrolls 982 students and employees 54 teachers. The

average composite ACT score for students was 18.7 in 2017. In terms of ACT college-ready benchmarks, 46% of students met the English benchmark score of 18, 26.9% of students reached the math benchmark score of 22, 33.8% met the reading benchmark score of 22, and 22.8% of students met the science benchmark score of 23. In all, only 14.7% of students met all four college-ready benchmarks. The 4-year cohort graduation rate rose during 3 of the 4 years from 2014-2017 with the top mark coming in 2016 at 88.9%, a 10% increase from 2014. The 4-year cohort graduation rate for 2017 was 86.7%.

The school's demographics also differ from the school district at large, containing a larger percentage of African-American students than the other two areas of the district at 27.7%; however, they are similar to the other two areas in terms of socioeconomic student status with a free and reduced lunch population of 54.4%, compared to the district rate of 55%. The high school's direct attendance area has one feeder middle school and three feeder elementary schools. The middle school and one elementary school also have a 21st CCLC program with some alignment between the programs.

Description of the Program

Theoretical framework. The program development was guided by the Expanded Learning Theory from the Expanded Learning and Afterschool Project (2012) "that provides educators and communities with research and promising practices for effective ways to leverage the time beyond school to accelerate student achievement" (p. 1). The principles of expanded learning theory are included and explained in Table 3. There are

many elements within the framework to engage students outside of the traditional school

day. This framework drives the design of the 21st CCLC program under study and provides a rationale for research-based success.

Table 3
Principles of Expanded Learning Theory

High quality expanded learning, after-school, and summer programs incorporate:	
School-community Partnerships	Building upon strong collaboration between communities and schools
Engaged learning	Incorporating learning that is hands on and engaging
Affordability and scalability	Utilizing financial models that are affordable, scalable, and sustainable
Learning time after school and during the summer	Adding significant time for learning and enrichment that complements the school day
Family Engagement	Engaging families to participate in their children's learning
Health and Wellness	Linking to meals and providing opportunities and supports for physical and mental well-being

Source: Expanded Learning and Afterschool Project (2012).

The 21st CCLC program at the study high school is a 30-week program serving approximately 100 students in Grades 9-12. The high school program is one of three 21st CCLCs in the local education agency. All three programs are in the same attendance area, and there is limited collaboration and alignment between the three programs. The high school program has interaction with the middle school program to acquire students and information and align the programming services throughout the system (Anonymous, personal communication, January 22, 2018).

Students eligible for the program are identified using standardized test data including South Carolina PASS data, end-of-course examination data, and classroom grades. The program runs for 2.5 hours per day, Monday through Friday. Bus

transportation is provided for those students who need it at the end of each day.

The program's aim is to provide a quality after-school program focused on helping students have a vision for a successful future, in both school and life. The specific objectives are to (a) increase credits towards graduation, (b) increase attendance, (c) decrease behavior problems, and (d) improve community relationships and school perceptions. The program is evaluated annually under the external system via the state of South Carolina through input data from the site program director.

Program schedule. For 2014-2015, the program began at 3:15 p.m. and lasted until 5:45 p.m., 5 days per week. For the first hour of the program, students are involved in academic assistance in all areas. At 4:15 p.m., students are provided a snack via the cafeteria with compliance under the USDA after-school program. At 4:30 p.m., students begin two sessions, each one 30 minutes in length, in one of the ancillary services of the program, including, but not limited to, life skills, the STEAM lab, college and career focus, physical activity, and intramural sports.

Academic program services. The academic assistance includes small group instruction related to regular day instruction and technology-based remediation. Two teachers are available daily in English, math, social studies, and sciences as well as two additional teachers in the ancillary areas. With at least 10 teachers available daily, the student-teacher ratio is never more than 10:1. The teachers use the APEX program, a virtual learning program designed to help students earn high school credits in the core academic areas. To help combat literacy issues with the students, the USA Testprep software program, a platform designed to improve test performance and achievement, is

used approximately two times per week. The final component of the academic program is a STEAM 21st century learning lab which includes NAO robots, digital photography, video and audio programs, and School Beats recording equipment. This design element is intended to enhance higher order thinking skills, mathematical skills, and analytical skills.

Ancillary program services. The program includes multiple enrichment areas including financial literacy, employment etiquette, character education, and transition to postsecondary education. Financial education focuses on the Jump$tart standards from a local nonprofit group in the region. Along with financial education, students receive employment etiquette instruction on interview skills, job applications, and resume creation. Character education includes conflict resolution, positive behavior reinforcement, and peer meditation. Through a partnership with a local violence victim advocacy group, students participate in the Relationship Education Project, a program designed to teach people the characteristics of healthy relationships as well as the warning signs of unhealthy, potentially abusive relationships.

There are 3 days per week of physical activity including Friday intramurals as well as education, guidance, and assistance on postsecondary transition including entrance requirements, application completion, financial aid, and NCAA eligibility requirements. Students are also given field trip opportunities to travel to colleges and universities in the area to meet with admission representatives and current college students. The South Carolina Career Information System, an online career assessment and related systems management platform, is utilized to help identify career paths for the students enrolled in the program. Finally, the CCLC provides a nonthreatening

environment to help bridge the gap between the school and the community. The major component of this focus area is the quarterly "Family Focus Nights" workshops designed to offer attractive topics to encourage parents to come to the school and establish positive relationships with school personnel aligned with both the elementary and middle school program.

Program participants. Student participation is limited to 100 students in Grades 9-12. Students are identified using multiple data points. For entering ninth-grade students, eighth grade state testing, classroom grades, attendance, and frequency of disciplinary infractions are used. For 10th-12th grade students, end-of-course examination grades, classroom grades, attendance reports, and disciplinary infractions are used to identify students and then provide services to the students. Table 4 contains the demographic data for students who were regular attendees during the 2015-2016 school year (21st Century Grant Services, 2016).

Table 4

21st CCLC Attendee Demographic Information

Male	Female	Black	White	Hispanic	Asian	Other
39%	61%	39%	41%	0%	2%	18%

Previous evaluations of the local 21st CCLC program. The South Carolina Department of Education 21st CCLC office adopted Continuous Improvement Process for After School (CIPAS) to help guide and evaluate the 21st CCLC programs in the state. The CIPAS program provided self-assessment rubrics that required local educational agency 21st CCLC programs to assess the seven major program components through an online system. The areas assessed are community and family, programming, management and administration, staffing and training, finance, research and evaluation,

and advocacy. Table 5 contains the results for the program in the 2012-2013 school year. The program was rated below the state average in terms of overall average and was not above the state average in any category. A misalignment in resources and execution was discovered and prompted the need for a more thorough and comprehensive evaluation (Rupert & Towle, 2013).

Table 5

2012-2013 CIPAS Evaluation for the Research Program

Community & Family	Program	Manage & Admin	Staffing & Training
2	3	2	2
Finance	Research & Evaluation	Advocacy	Total/Average
2	1	1	13/1.9

The program was evaluated again at the end of the 2016 school year which only reported the CIPAS total, compliance rating, and qualitative survey data from teachers. For the 2016 evaluation, the CIPAS score was 24.5, a growth of 11.5 points from the 2012-2013 school year, and a compliance rating of 6 of 10. Also included in the 2015-2016 evaluation was the data from the Federal Teacher Survey. Table 6 shows the data from the 2016 Federal Teacher Survey. In this survey, classroom teachers rated regular attendees on a Likert-type scale in each of the following areas: homework, class participation, attendance, behavior, academic performance, and social interaction. Based on this qualitative data, students are generally improving in academic areas but not in social/emotional areas or personal responsibility areas. The program rated at or above the state average in terms of homework completion, participation and volunteering, attentiveness, and academic performance but well below the state average in terms of

attendance and classroom behavior impact (21st Century Grant Services, 2016).

The 2012-2013 and 2015-2016 evaluations only included qualitative data regarding student performance in the areas stated in Table 6. This current study expounds upon the qualitative data and examines the 21st CCLC program's statistical impact on academic progression, attendance, and disciplinary incidents. It also provides a comparative analysis between at-risk students who participated in the 21st CCLC program and those who did not.

Table 6

2016 Federal Survey Results for Research Program

To what extent has your student changed their behavior in terms of:	% of students showing improvement
Turning in his/her homework on time?	67%
Completing homework to your satisfaction?	67%
Participating in class?	50%
Volunteering (e.g., extra credit/more responsibility)?	50%
Attending class regularly?	17%
Being attentive in class?	50%
Behaving well in class?	17%
Academic performance?	67%
Coming to school motivated to learn?	50%
Getting along with other students?	33%

Overview of Methodology

The program evaluation study employed quantitative causal comparative analysis between identified at-risk students who attended the 21st CCLC program and those who did not within the same school. The study utilized the chi-square test for homogeneity to determine if there was a significant difference between at-risk students who attended the 21st CCLC program and those who did not in the areas of academic credit attainment, school attendance, and disciplinary infractions during the school day. Student data were

reviewed for the 2017-2018 school year in terms of number of credits earned, number of school days missed, and number of disciplinary infractions requiring either ISS or OSS.

Delimitations. The study was limited to one 21st CCLC at one high school in the northwest corner of the state of South Carolina. The study focused on 1 school year as opposed to multiple school years.

Definitions of Terms

ACGR. "The number of students who graduate in four years with a regular high school diploma divided by the number of students who form the adjusted cohort for that graduating class" (34 C.F.R. §200.19[b][1] [i]-[iv]).

At-risk student.

> Students or groups of students who are considered to have a higher probability of failing academically or dropping out of school. The term may be applied to students who face circumstances that could jeopardize their ability to complete school, such as homelessness, incarceration, teenage pregnancy, serious health issues, domestic violence, transiency (as in the case of migrant-worker families), or other conditions, or it may refer to learning disabilities, low test scores, disciplinary problems, grade retentions, or other learning-related factors that could adversely affect the educational performance and attainment of some students. (Education Reform Glossary, 2013a, para. 1)

Cohort. Refers to "groups of students who are educated at the same period of time, for example the students who entered high school in the 2015-16 school year, commonly coded as 2015 GR 09 students" (Education Reform Glossary, 2013b, para. 1).

Carnegie unit of credit. "A basis for measuring school work. A unit would

represent a single subject taught for one classroom period for five days a week. Fractional units would be awarded for subjects taught less frequently" (U.S. Department of Education, International Affairs Office, 2008, p. 1).

Status dropout rate. Represents the "percentage of 16- through 24-year-olds who are not enrolled in school and have not earned a high school credential, either a diploma or an equivalency credential such as a General Educational Development [GED] certificate" (McFarland et al., 2016, para. 2).

Chapter 2: Literature Review

Overview

Dropping out of high school has tremendous personal and social costs. Dropouts earn less and cost more than their more educated counterparts (Amos 2008; McFarland et al., 2016). Much time and effort has been put into increasing the number of students who complete requirements for high school graduation. Research indicates two major designs for reducing the dropout percentage. First, students must be effectively identified to bolster achievement through either selective or universal screening procedures. Research points to the need to employ universal screening procedures as opposed to selective procedures with the rationale that universal procedures lack bias and have the ability to reach more students (Gansle & Noell, 2008; Lazarus & Ortega, 2007; Salinger, 2016). Second, based on federal legislation under No Child Left Behind, the Every Student Succeeds Act, and IDEA, schools are required to identify students who are not making adequate yearly progress in the academic curriculum and provide adequate supports to increase the likelihood of student chances to complete the high school academic program.

Identification of At-Risk Students

Research points to the need to identify students as early as possible in the educational process, both year to year and throughout the course of a student's educational time line. Salinger (2016) recommended the use of universal screening procedures versus selective identification to minimize bias inside the screening procedure. Universal screening processes are ones in which systems use readily available data such as grades, attendance, and disciplinary marks to identify students throughout the entire system.

Bruce, Bridgeland, Fox, and Balfanz (2011) recommended using data from the sixth grade school year to predict future issues through the use of the ABCs: attendance, behavior, and course performance. Their research contended that students who attend less than 85-90% of the school days have "unsatisfactory" marks for behavior in at least one class and a final grade of F in math, English, or a credit-bearing high school course are more likely to be at risk of not graduating. Bruce et al. stated that students who have more than one of these indicators have only a 15-25% chance to graduate high school on time or within 1 year of the expected graduation date.

In a study of high school students in Chicago, researchers at UChicago CCSR developed an indicator that broke down a large number of factors into a simplified measure for school administrators to follow. The program derived a list of students who were not "on track" based on ninth grade course achievement. Specifically,

> a student is considered 'on-track' to graduate if he or she earns at least five full-year course credits (ten semester credits) and no more than one semester F in a core course (English, math, science, or social science) in their first year of high school. (Roderick et al., 2014, p. 3)

This specific measure allowed schools to target interventions sooner in student high school careers. From 2007 to 2013, the on-track rate rose 25% in Chicago public schools, representative of almost 7,000 students per year who are on track to graduate in this one district alone (Roderick et al., 2014).

Academic Progression and Achievement

When reviewing research on academic progression, a major research theme developed: the ninth-grade transition and academic achievement. According to the

Southern Regional Education Board (2002), "The passage of students from the middle grades to high school is the most difficult transition point in education" (p. 1).

Research performed in the Chicago Public School System reduced a large number of variables into one manageable intervention: the ninth-grade transition. Studies from the late 1990s and early 2000s found that as students made the middle to high school transition, their grades, attendance, and school engagement declined drastically (Allensworth & Easton, 2007). The research determined students on track to graduate to be students "that earn at least five full-year course credits and no more than one semester F in a core course (English, math, science or social science) in their first year of high school" (Roderick et al., 2014, p. 4).

Other research points to the issue that requiring ninth-grade students to pass specific courses for graduation at this point in their academic career only increases the stressors on a student transitioning into the first year of high school (McCallumore & Sparapani, 2010). Coupling the transition fears with the increased academic requirement has led practitioners to focus on success in the ninth grade school year using different approaches including freshmen academy models, transition coaches, and extended learning opportunities such as a 21st CCLC grant.

Attendance and Achievement

Beginning in 2014, the Federal Office of Civil Rights added a new reporting category titled chronic absenteeism which accounts for students who miss more than 3 weeks of school. This statistic takes into account absences for any reason including excused, unexcused, and disciplinary events. This is a noted difference from the truancy laws, which only account for unexcused absences. According to data released, more than

6.8 million students are chronically absent, representing nearly 14% of the total school population. Nineteen percent of high school students, nearly three million students, are included in the students who miss 15 days of school or more (U.S. Department of Education, 2016).

A growing body of research has indicated that school attendance is strongly linked to school achievement and an increased probability of graduation. Allensworth and Easton (2007) found that attendance in the ninth grade was a key indicator for students who finish high school. Specifically, they found that attendance in ninth grade predicted graduation success eight times better than eighth grade test scores. Other research has found a correlation with and a need to address chronic absenteeism in the early grades to improve educational outcomes (Balfanz, Herzog, & Mac Iver, 2007; Chang & Romero, 2008; Ready, 2010). Research has also pointed to absences being a leading issue for students in poverty and minority students (Ginsburg, Jordan, & Chang, 2014). All of this research points to a need for close attendance monitoring and implementing strategies to improve school attendance as soon as it is recognized.

In a study of Utah students using a cross-sectional data set and simple logistic regression, a drop in reading level and lower scores on end-of-year, criterion-referenced test scores were observed in reading, math, and science across grade levels 3-11. GPA was also found to decrease using a longitudinal data set estimated using survival analysis. Table 7 shows the outcomes based on chronic absences. There is a noted correlation between chronic absenteeism and lower academic performance.

Table 7

Chronic Absenteeism's Effect on Academic Measures

Outcome	Effect of Chronic Absence
Reading on grade level	Odds of being below grade level were 1.7 times higher
CRT Language	Decreased 3.798 points, on average
CRT Math	Decreased 5.861 points, on average
CRT Science	Decreased 4.850 points, on average
Cumulative GPA	Decreased .854 points, on average
Dropout	Odds of dropping out were 7.4 times higher

Source: Utah Education Policy Center (2012).

Discipline and Achievement

Exclusionary discipline practices such as ISS and OSS are the most used disciplinary consequences in public education in the United States. In the 2011-2012 school year, 3.5 million students received ISS, and 3.45 million students were suspended out of school. The data show that students of color and students with disabilities were impacted at a higher rate than White and nondisabled peers (U.S. Department of Education, Office of Civil Rights, 2016). Many research studies have identified OSS as a main indicator for high school dropouts (Balfanz et al., 2007; Balfanz, Byrnes, & Fox, 2014).

In a sample of 289 high schools in Virginia, Lee, Cornell, Gregory, and Fan (2011) found that schools with high suspension rates also had high dropout rates. There was also a stronger correlation between suspension and dropout for White students than for Black students inside the high suspension rate schools. Students receiving OSS are linked to lower attendance rates, lower grades, and a move towards disengagement. A longitudinal retrospective analysis of student achievement indicated suspended students are lower academically than the matched peers and make much smaller gains academically over time than nonsuspended peers when comparing students on grade,

gender, race, free/reduced lunch status, and English language proficiency (Arcia, 2006). Burkhardt (2009) used regression analysis to determine the relationship between suspensions and GPAs in core academic subjects. In the study, suspension was found to be a strong negative predictor of student performance. Another study from Balfanz et al. (2014) found suspension, even one, in the ninth-grade year increases the likelihood for dropout from 16% to 32%, a negative response to the discipline policies within schools.

In an interesting counterpoint to the broad theoretical base regarding suspensions and academic achievement, Kinsler (2013) performed research and hypothesis game testing that theorized that lengthy suspensions actually deterred negative behavior among students who are on the verge of committing an offense. The design has an economic undertone as observed by the project design,

> which is similar to that of a monopolist choosing prices for a set of differentiated goods. The principal sets the price of misbehavior in order to maximize utility given the demand schedule of the student body. Students take prices as given and choose their behavior optimally. Using the observed equilibrium discipline policies, student behavior, and achievement outcomes, I first estimate student utility and achievement parameters. Then, taking the student parameters as given, I estimate the parameters of the principal's utility function that rationalize the observed discipline policies. (Kinsler, 2013, p. 356)

Kinsler's research design argued that cross-school differentials in discipline levels actually contributed to higher academic performance from school to school by maximizing the system variables to the students. The research bore this out by showing redistributed models where the new combined schools were not as effective at academic

progress as the original school's design, as caused by a collective drop in learning time for the entire student population.

When reviewing the data, the overwhelming research base points to a need to decrease suspension rates for students. In a multi-level modeling design comparing students in Victoria, Australia and Washington State, United States, it was found that both student issues and school issues must be addressed to decrease student suspensions. The main areas of concern were male students, previous antisocial and/or violent behavior, rebelliousness, and academic failure (Hemphill, Plenty, Herrenkohl, Toumbourou, & Catalano, 2014).

OST for High School Students

As of 2017, approximately 55% of the 21st CCLC programs were offered to middle and high school students. There is limited conclusive evidence presented by the current body of research regarding effective after-school activities for high school students. Based on experience and expert analysis, Beckett (2009) presented recommendations with varying levels of evidence. Table 8 presents the five recommendations for OST programming with the noted evidence levels. It is noted that there is little confidence in terms of research regarding effective strategies with OST with students due to the range of programs as well as the lack of strong research validity. There were no recommendations with strong levels of evidence reported, meaning there was no research presentations with both external and internal levels of validity. One recommendation qualified for a moderate evidence level, containing either high internal or external validity, but not both. Finally, a low level of evidence means the recommendations of experts are derived from theories that are supported by direct

evidence that does not reach the moderate or strong level. The only recommendation to reach the moderate level of evidence was for educators to adapt instruction to individual and small group needs. All of the other four recommendations had a low level of evidence. They included program alignment with the school day, maximizing participation and attendance, providing engaging learning experiences, and assessing the program and using the results to improve the quality of the program.

Table 8

Institute of Educational Sciences Recommendations and Corresponding Levels of Evidence

Recommendation	Level of Evidence
Adapt instruction to individual and small group needs.	Moderate
Maximize student participation and attendance.	Low
Assess program performance and use the results to improve the quality of the program.	Low
Provide engaging learning experiences.	Low
Align the OST program academically with the school day.	Low

Another study researched nineteen 21st CCLCs in one Midwestern state and found that evidence-based practices fell more in the academic practice model than the practices related to student voice and choice. The main practices included tutoring services and credit recovery. Due to the limited number of high school OST programs, the researcher recommended the programs must focus on three key areas including appropriate program activities, recruitment and retention of students, and student choice and voice (Holstead, Hightower King, & Miller, 2015).

In a mixed-methods study evaluating 53 identified high performing after-school programs, there were 10 common characteristics shared among the programs. The

common characteristics included strong leadership and clearly established goals, a "seamless approach" relationship with the school day activities, use of research-based strategies, staff members who were able to build rapport, maintenance of high expectations, and keeping students motivated and engaged (Huang et al., 2010).

There is limited research regarding OST programming for high school students. Those OST programs that have been successful have shown to have a strong correlation to the school day, especially in the role of credit recovery and completion. There still is a noted need for programs to develop systems to improve student engagement and choice as well as better retention and recruitment strategies. Most strategies involving recruitment and retention involved informal word-of-mouth strategies and giveaways for attendance.

Systematic Reviews and Meta-Analyses of OST Programs

A meta-analysis of after-school programs whose stated purpose is to improve the personal and social skills for students who attend indicated that students who attended OST programs demonstrated an increase in bonding with the school, improved self-perceptions, and a significant reduction in negative behaviors when compared to students who did not attend the OST program. The interesting caveat was that there was a great difference across programs, meaning that some programs were much more successful than others. The study noted that programs that implemented earlier effective training programs were more successful at achieving positive outcomes compared to those that did not. The study's authors recommended further research to understand why some programs are successful, while others are not (Durlak, Weissberg, & Pachan, 2010).

A later systematic review and meta-analysis of 24 studies with 64 effect sizes found that students who participated in the after-school programs did not demonstrate better external behavior or attendance when compared to their comparison group peers, which contradicts the previous research from Durlak et al. (2010). Kremer, Maynard, Polanin, Vaughn, and Sarteschi (2015) found there needed to be a noted outcome specifically related to school attendance as opposed to having a generic OST program with the idea that it will impact multiple areas. Programs that operate without mechanisms to address specific areas are likely to fail in the most needed areas.

In a study of Philadelphia OST programs, there was a significant relationship between participation levels and student outcomes in the areas of absences, earning math and ELA credits, and having fewer OSSs at the elementary, middle, and high school levels. There was limited evidence of impact with regard to end-of-course examination scores and end-of-year credit (Gao, Hallar, & Hartmann, 2014).

Contrary to the previous analyses, Roth, Malone, and Brooks-Gunn (2010) argued that there are

> few links between the amount of participation and developmental outcomes. This evidence suggests that general statements proclaiming that greater participation in formal afterschool programs leads to improved outcomes are premature and inaccurate. Instead, these findings illustrate that different developmental gains are associated with different aspects of participation. They further show that the links between outcomes and aspects of participation are qualified by age group or study methodology. (p. 321)

Roth et al.(2010) provided the rationale that when comparing high-level participants with nonparticipants, there was a noted level of benefit, but not when comparing high-level participants with students who participate less frequently. The base argument of a dichotomous participation (i.e., yes or no) created a system that is too simplified when measuring the true level of participation. The researchers found, when reviewing current studies, greater frequency in attendance of the after-school programs only positively affected the school day attendance of the students, not the academic or social-emotional outcomes (Roth et al., 2010).

Program Evaluations of 21st CCLC Programs

The first national evaluation of the 21st CCLC program was published in 2003. The United States Department of Education contracted with Mathematica Policy Research to review the implementation and impact of elementary and middle school programs. *When Schools Stay Open Late: The National Evaluation of the 21st Century Community Learning Centers Program—First Report* provided a look at 1,000 elementary students in 18 schools in seven districts via random selection as well as approximately 4,000 middle school students in a comparative matched sample (Dynarski et al., 2003). The findings revealed that the 21st CCLCs changed who the students spent time with after school, but the 21st CCLC programs had limited positive influence on academic performance, no impact on the feeling of safety or the decrease of latchkey children, and negative influences on behavior (Dynarski et al., 2003).

Two years later, the same group reviewed a second year of elementary data as well as some middle school programs and found more inconclusive results. The only noted area of improvement was the feeling of safety among the treatment group versus

the control group. All other aspects of the program showed no statistically significant impact of the program across the study.

In 2014, the state of West Virginia completed a quasi-experimental examination of within- and between-group difference in end-of-year assessment outcomes in both mathematics and reading/language arts between students who attended a 21st CCLC and those who did not during the 2013-2014 school year. Their results showed no significant differences between students who attended the 21st CCLCs and those who did not. The only area where the differences approached statistical significance was in the case of eighth- and 10th-grade reading and language arts (White & Whisman, 2014).

A group of researchers studied nineteen 21st CCLC programs looking for the programs' practice in three areas of focus: program activities, recruitment and retention, and student choice and voice. The researchers reviewed printed materials and vignettes and performed site visits to each of the sites. Table 9 provides the number of different program activities offered by each site, out of 19. From this data, it was determined that most programs had an overt academic focus as an extension of the school day with credit recovery opportunities involved in the highest percentage of items. Limited focus was placed on college and career planning, pointing to a focus on the immediate circumstances, as opposed to long-term value (Holstead et al., 2015).

Table 9

Program Activities Offered by High School 21st CCLC Programs

Program Activity	Number of Sites (of 19)
Homework Help	11
Mandatory for all	3
Mandatory for some, based on need	3
Voluntary	5
Credit Recovery Opportunities	15
Format	
Teacher led	1
Computer based	14
Timing	
Before school	2
After school	12
During school	5
Summer	1
Any time online	4
Career and College Planning	7
Information about colleges	4
College readiness	2
College visits	3
Information about careers	2
Guest speakers on careers	1
Life skills opportunities	10
Character development	3
Cooking classes	2
Financial literacy	4
Nutrition and healthy living	5
Self-defense	1
Social skills	3

Source: Holstead et al. (2015).

With regard to recruitment and retention, the programs relied much more on passive recruitment and retention programs, as opposed to active ones. The most popular recruitment strategy was communication from school personnel. The researchers also noted there was a need to improve the program practice in student choice and voice.

There was extremely limited choice provided to students, and the vast majority of student input on program decisions was shown to be in informal conversations (Holstead et al., 2015). Based on this information presented, the vast majority of the 21st CCLCs were after-school programs based on homework help and credit recovery via a computer-based system. There were limited enrichment or like skills opportunities.

Research completed by Paluta, Lower, Anderson-Butcher, Gibson, and Iachini (2015), using data from the Ohio quality assessment rubric, found that 21st CCLCs in Ohio excelled at developing caring relationships with youths, promoting prosocial norms, and "enhancing participants' life skills, while they had a lesser impact on home environments and supporting caregivers" (p. 54). Academic outcomes were also found to be below the levels of the strength areas involved with youth development. There was also a demonstrated significance between areas of quality within the program and the perceived effectiveness of the component, meaning that quality programs are much more than just safe havens for students during the critical after-school hours. The research suggested that the perceived outcomes were the drivers of the program components. Because of their role in influencing youth, they suggested that meaningful parent and family engagement is particularly important to increase impact.

There is limited qualitative research regarding after-school programs and advancement towards graduation. Bell (2013), using qualitative procedures under the focus of hermeneutical phenomenology, found that three themes emerged among surveys from recently graduated students who participated in one high school after-school program. The three main themes uncovered in the research were an improved overall self-worth for the students, a connection between high school and careers, and

connections with adult mentors (Bell, 2013). Coupling this information with the previous meta-analyses poses a strong argument regarding the positive impact of after-school programs.

Need for Further Research

Because the majority of review focuses on large scale meta-analysis or comparison of participants to nonparticipants on end-of-year standardized tests, there is a need to understand the program impact on credit progression as well as a need to increase the research into the effectiveness of specific high school 21st CCLC programs. Further research should also focus on tangible longitudinal outcomes, as opposed to high stakes standardized testing.

Summary

The literature provides insight into at-risk student identification, academic progression, and attendance and their effect on achievement as well as OST for high school students and family perceptions of schools and after-school programs. The studies include previous research into effective OST programs as well as the limited research into 21st CCLCs for high school students. It demonstrates how this study can fill a gap in the research for this federal program.

Chapter 3: Methodology

Introduction

This study was a quantitative program evaluation which followed a causal comparative research design. It investigated the link between a 21st CCLC program for at-risk high school students and its impact, if any, on student academic progression, attendance, and discipline. A causal comparative research design was chosen for this study. A causal comparative research design is chosen when two main items are present. First, the independent variables must be categorical in nature. Second, causal comparative designs are used when the variables are not experimentally manipulated, usually due to ethical or practical concerns. Because it is practical and ethical to attempt to have as many students involved in the extended day 21st CCLC program, the study was best suited for a causal comparison research design.

Research Questions and Hypotheses

1. Is there a difference in education progression between students identified as at risk participating in the 21st CCLC program and similar peers not participating in the program?

   H_0: There is no difference in academic progression, as measured by number of Carnegie units earned, between students identified as at risk participating in the 21st CCLC program and similar peers not participating in the program.

   H_a: There is a statistical difference in academic progression, as measured by number of Carnegie units earned, between students participating in the 21st CCLC program and similar peers not participating in the program.

2. Is there a difference in school attendance rate between students participating in the 21st CCLC program and similar peers not participating in the program?

   H_0: There is no difference in number of school days missed between students participating in the 21st CCLC program and similar peers not participating in the program.

   H_a: There is a statistical difference in number of school days missed between students participating in the 21st CCLC program and similar peers not participating in the program.

3. Is there a difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program?

   H_0: There is no difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program.

   H_a: There is a statistical difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program.

The hypotheses were tested using the chi-square test of homogeneity using an alpha of 0.05 to determine if there was a difference in academic progression, school attendance, and school day disciplinary infractions between at-risk students who attended the 21st CCLC for at least 10 days and at-risk students who did not attend the program.

Target Population

The school chosen for this study was selected because it is a high school with a 21st CCLC program that has been operating for more than 1 year. All students who were identified as at risk and attended the research school for the 2017-2018 school year were used in the study. Student Carnegie units earned, total number of absences, and total number of disciplinary events during the school day were compared between students who participated in the 21st CCLC and students who were identified to attend the program but did not attend the program during the 2017-2018 school year. The study compared the categories of number of credits earned, number of school day absences, and number of disciplinary incidents during the school day between all identified at-risk students who attended the program for at least 10 days and all students identified as at risk who did not attend the program.

The research school provided a comprehensive list of students who have been identified as at risk to not graduate high school based on attendance and grades. Every student was rated on a scale from one to four based on grades and attendance. Every student who rated at an average of two or higher was included in the study. Each student in the provided list was in one of two groups based on attendance in the 21st CCLC program. Students must have attended the program for at least 10 days to be included in the study for the "attended" grouping. Students must not have attended the program at all during the 2017-2018 school year to be included in the "did not attend" group. Also, not all students who attend the program are considered at risk; therefore, not all students who attended the program during the academic year were included in this study.

Instrumentation

The instruments used to collect data were the PowerSchool database management system which includes student academic progress, disciplinary incidents, and attendance history; the attendance rosters from the 21st CCLC; and a chi-square analysis calculator. The PowerSchool student information system is considered reliable and valid as it is checked and cross-checked by multiple staff members prior to being saved to the database. The PowerSchool Student Information System is the required system for student information in the state of South Carolina. Daily attendance rosters from the 21st CCLC program were used to determine the student groupings. The 21st CCLC daily rosters are required by the federal guidelines for the 21st CCLC program and must be accurate to determine appropriate funding.

Procedures

First, consent was requested from the local educational agency and school to use at-risk student data without personally identifiable information. See Appendix A for letters of consent. Once consent was granted, raw data were collected, disaggregated, and categorized to prepare the data for the chi-square analysis of homogeneity.

Student academic records were reviewed at the end of the 2017-2018 school year to determine the total number of Carnegie units earned during the 2017-2018 school year, number of disciplinary incidents for the 2017-2018 school year, and total number of school days missed for the 2017-2018 school year. Once the data were disaggregated, students were placed into categories based on cutoff points in Table 10 in the areas of academic progression, attendance, and discipline.

For academic progression, there were two distinct categories. The lowest category included students who completed less than eight credits. The second academic category contained students who completed eight or more credit units during the 2017-2018 academic year. The categories were determined based on the school's schedule. For the 2017-2018 academic year, the school operated on a 4x4 block schedule, meaning students took four classes for 90 days in semester 1 and four classes for 90 days in semester 2. This provided the expectation for students to complete 8 credit hours in the 2017-2018 school year.

For attendance, there were three categories determined by federal reporting regulations and state policy. The highest category, 18 or more days for the school year, was determined based on federal guidelines for chronic absenteeism, set at 10% of total school days. The middle classification, 6 to 17 school days, is the gray area between the two district's thresholds. The final category, 5 or less school days missed, is the threshold for students to automatically receive academic credit when coupled with a passing grade.

Table 10

Disaggregated Categories for Differentiation for Chi-Square Test for Homogeneity

	Academic	Attendance	Disciplinary Incidents
1	8 or more units earned	5 or less school days absent	0 incidents
2	Less than 8 units earned	6-17 school days absent	1 or more incidents
3		18+ school days absent	

Discipline categories were based on incidence. First, students who had no incidents requiring ISS or OSS were grouped. Second, students who had any incidents where ISS or OSS was assigned were grouped.

Once the data were placed into the distinct categories for each research area, the data were entered into a chi-square test of homogeneity to determine if there was a statistically significant difference in academic progression, attendance, and disciplinary infractions during the school day for at-risk students attending a 21st CCLC for at least 10 days compared to at-risk students who did not attend the program. For all tests, the significance level was set at 0.05. The study assumed that all data entered into the PowerSchool SIS system were valid, reliable, and accurately recorded into the database system. The researcher also assumed that each classroom is adhering to the state of South Carolina standards of instruction for the subject area.

Chapter 4: Results

Introduction

Many intervention programs including, but not limited to, coaches, web-based services and accelerated curriculums have been implemented to help improve the graduation rate of students who are determined to be at risk of not completing the requirements for a high school diploma. The largest of the current federal programs is the 21st CCLC program with over $1.2 billion allocated for the 2018 budget year (Afterschool Alliance, 2018). This quantitative research study was designed to evaluate the impact of one 21st CCLC grant program on the attendance, academic, and disciplinary outcomes of high school students determined to be at risk in a high school in rural South Carolina.

The research study focused on the "most highly predictive factors of dropping out" (Bruce et al., 2011, p. 3): academic progress, attendance, and disciplinary incidents. The study implemented a chi-square test for homogeneity to determine if there is a statistical significance in the attendance, academic progression, and disciplinary events that result in ISS or OSS between at-risk students who attended the 21st CCLC program for at least 10 days during the 2017-2018 school year and those students who did not attend the program during the same school year.

Research Questions and Hypotheses

Based on Bruce et al.'s (2011) Early Warning System (EWS) developed by the Everyone Graduates Center, the focus of this study was to determine the impact, if any, on the academic progression, the attendance, and the disciplinary incidents of identified

at-risk students in a rural high school in South Carolina. Each research question focused on one aspect of the EWS.

1. Is there a difference in education progression between students identified as at risk participating in the 21st CCLC program and similar peers not participating in the program?

   H_0: There is no difference in academic progression, as measured by number of Carnegie units earned, between students identified as at risk participating in the 21st CCLC program and similar peers not participating in the program.

   H_a: There is a statistical difference in academic progression, as measured by number of Carnegie units earned, between students participating in the 21st CCLC program and similar peers not participating in the program.

2. Is there a difference in school attendance rate between students participating in the 21st CCLC program and similar peers not participating in the program?

   H_0: There is no difference in number of school days missed between students participating in the 21st CCLC program and similar peers not participating in the program.

   H_a: There is a statistical difference in number of school days missed between students participating in the 21st CCLC program and similar peers not participating in the program.

3. Is there a difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program?

H_0: There is no difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program.

H_a: There is a statistical difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program.

Setting and Participants

The setting for the research study was one high school in a rural school district in South Carolina. The total population of the school during the 2017 school year was 982 students (South Carolina School Report Card, 2017). Academic, attendance, and disciplinary incidents for the 2017-2018 school year of at-risk students were gathered and utilized.

Participants were students who were identified through local education agency protocols. Reviewing academic and attendance data, students were rated 0-4 based on predetermined measures. Research focused on students who were rated higher than a two on a scale of four for at-risk behaviors in grades and attendance. After the at-risk students were identified, the student data were split into two groups based on attendance in the 21st CCLC program during the 2017-2018 school year. Students who attended at least 10 days were grouped together, and students who did not attend the program at all during the 2017-2018 school year were grouped together.

Data Analysis

The study utilized a chi-square test of homogeneity to determine if "two or more samples differ in their distributions on a single variable of interest" (Franke, Ho, &

Christie, 2012, p. 450). Two assumptions must be true for the test to return valid results. The first assumption is that all data must be categorical. Second, only 20% of the returned values may be below five to ensure validity.

Student population. The total number of students identified at level two or higher of the at-risk assessment for the research school was 231 students in 2017-2018. This included 65 students enrolled in ninth grade, 80 enrolled in 10th grade, 84 in 11th grade, and two 12th graders. Extensive demographic data including gender and ethnicity were not collected for these at-risk students, as it was not a variable considered for this research study. Table 11 contains the aggregated information regarding student population. Consult Appendix B for student data with personal identification redacted.

Table 11

Identified At-Risk Population of Research School by Grade Level

Grade Level	Attended 10+ days of 21st CCLC program	Did not attend 21st CCLC program
9	13	52
10	17	63
11	8	76
12	0	2

Academic data analysis. Student data from the 2017-218 school year were gathered detailing the total number of Carnegie credits earned for the entire school year. The categories were defined based on total expected earned credits. In the schedule format of the research school, a 4x4 block, students can earn eight credits per year. This was set as the limit to separate the student data into categories. The research subjects included 231 students, including 38 students who attended the 21st CCLC program and 193 who did not. Most students in both groups earned at least eight credits for the 2017-2018 school year. For students who attended the program, 31 of 38 students earned at

least eight credits. For students who did not attend the program, 135 of 193 students earned at least eight credits. A chi-square test of homogeneity was performed to determine whether there is a difference in amount of credits earned between students who attended the program for at least 10 days and students who did not attend. At the 0.05 significance level, there was no statistically significant difference between the academic progression for students who attended the program compared to students who did not attend the program. Table 12 contains the real and expected values as well as the χ^2 value and the *p* value for the chi-square test for homogeneity. See Appendix C for full χ^2 analysis on academic progression.

Table 12

Chi-Square Test of Homogeneity for Academic Progression

Academic Progression	Attended 21st CCLC	Did not attend 21st CCLC	χ^2 Value	*p* Value
8+ credits earned	31 *27.31*	135 *138.69*	2.214	0.1450
< 8 credits earned	7 *10.69*	58 *54.31*		

Note. Expected value is italicized.

Attendance data analysis. Student data were collected for total daily absences per student, including both excused and unexcused absences for the 2017-2018 school year. The numbers were placed into three distinct categories. The lowest category was 5 school days or less. The middle category was from 6 days to 17 days. The final category was 18 or more school days missed, 10% of the total number of days for the school year. Records were analyzed for 231 students with 38 students attending the 21st CCLC at least 10 days and 193 students not attending the program. A chi-square test for homogeneity was performed to analyze if there was a difference between the two groups of students.

For attendance, there was not a statistically significant difference in school attendance between students who attended the 21st CCLC and students who did not at the 0.05 significance level. Table 13 contains the real and expected values as well as the χ^2 value and the *p* value for the chi-square test. For full χ^2 analysis for attendance, see Appendix D.

Table 13

Chi-Square Test of Homogeneity Results for Attendance

School day attendance	Attended 21st CCLC	Did not attend 21st CCLC	χ^2 Value	*p* Value
5 or less days missed	27 *26.48*	134 *134.52*	0.931	0.627
6-17 days missed	5 *6.74*	36 *34.25*		
18+ days missed	6 *4.77*	23 *24.23*		

Note. Expected value is italicized.

Because of the low number of students in the students who attended at least 10 days category, one returned value was 4.77, under the expected threshold of five. This value is the only value that is below five, meeting the qualification that less than 20% be less than five, allowing for the test to be accepted as valid.

Behavioral data analysis. Information was collected regarding the number of documented events that occurred during the school day that resulted in either an ISS or OSS. The number of events that resulted in either ISS or OSS was totaled per students, and students were separated into two categories. Category one was for students with no ISS or OSS disciplinary events for the 2017-2018 school year. Category two was for students with one or more ISS or OSS events for the 2017-2018 school year. Two

hundred thirty-one student records were compared with 38 students attending the 21st CCLC program and 193 students not attending the program. A chi-square test for homogeneity was performed to evaluate if there was a difference between student disciplinary incidents when comparing students who attended the 21st CCLC program for at least 10 days and similar students who did not attend the program. Because the p value is greater than the significance level of 0.05, there was no statistically significant difference in the number of students who had disciplinary events in the two groups. Table 14 displays the real and expected outcomes as well as the χ^2 value and the *p* value for the chi-square test of homogeneity. Appendix E contains full χ^2 analysis of at-risk student disciplinary events.

Table 14

Chi-Square Test of Homogeneity Results for Disciplinary Incidents

Disciplinary Events	Attended 21st CCLC	Did not attend 21st CCLC	χ^2 Value	*p* Value
No ISS/OSS events	28 *28.95*	148 *147.05*	0.157	0.6915
1+ ISS/OSS event	10 *9.05*	45 *45.95*		

Note. Expected value is italicized.

Summary

The chi-square analysis of the academic, attendance, and disciplinary data for the two groups of students suggests there is no difference between the two groups in any of the three areas of emphasis. This research suggests the 21st CCLC program had a minimal impact, if any, on the at-risk students within the one research high school of the local educational agency.

Chapter 5: Conclusions and Recommendations

This quantitative research study was conducted to evaluate the impact of a 21st CCLC after-school program on academic progression, attendance rate, and disciplinary incidents of at-risk students in one high school in rural South Carolina for the 2017-2018 academic year. The study utilized a chi-square test of homogeneity to compare the academic, attendance, and disciplinary data of the selected at-risk students based on attending the after-school program for at least 10 days. The data analysis indicated no difference between at-risk students who attended the 21st CCLC after-school program and those who did not attend the program.

Research Question 1: Is there a difference in education progression between students identified as at risk participating in the 21st CCLC program and similar peers not participating in the program? Based on the analysis of quantitative data, there was not a statistically significant difference in the number of Carnegie credits earned during the 2017-2018 school year between at-risk students who attended the 21st CCLC after-school program and those who did not. The analysis from the chi-square test for homogeneity suggests the 21st CCLC program had no impact on selected at-risk student academic achievement during the 2017-2018 school year.

Research Question 2: Is there a difference in school attendance rate between students participating in the 21st CCLC program and similar peers not participating in the program? Based on the chi-square analysis of the quantitative attendance data for at-risk students at the research school, the 21st CCLC program had no impact on the attendance rate of students who attended 10 days when compared to the at-risk students who did not attend the program. Both groups attended school at similar rates for the

2017-2018 school year, as the *p* value was higher than the significance level of 0.05.

Research Question 3: Is there a difference in disciplinary incidents during the school day between students participating in the 21st CCLC program and similar peers not participating in the program? The research study suggests the 21st CCLC after-school program had no effect on student disciplinary rates when comparing the two groups of student records for the 2017-2018 school year. Both student groups had similar disciplinary rates at the research school during the school day.

When reviewing all three indicators together, it would be suggested that the 21st CCLC program had, at most, a limited effect on student academic progress, attendance, and disciplinary incidents: three of the most predictive factors to students dropping out (Bruce et al., 2011).

Limitations

Even though the research study suggests the after-school program had little effect on the academic, attendance, or behavioral data of the at-risk population of students during the 2017-2018 academic school year, there are different limitations that may adjust the true impact of the 21st CCLC program. This research study was designed to determine if attendance in a 21st CCLC program had a statistically significant effect on at-risk student academic progression, attendance, and disciplinary incidents when compared with similar at-risk students in one school in 1 academic year in rural South Carolina. This study was framed on the impact of an OST program on the various outcomes during the school day and should only be viewed in that way. The findings of this research study need only apply to the data and system as described.

There were three factors that presented limitations to this study. These limitations

include the small number of identified at-risk students who attended the program, the fact that there was only one research school, and the attendance data did not account for varying types of absences. Finally, there are qualitative factors that could have influenced the data.

First, the size of the group of at-risk students who attended the 21st CCLC created categorical data with only five members. Of a total of six expected values, the chi-square test for attendance returned only one below five. This could cause the χ^2 value to be invalid; however, because the value accounted for less than 20% of the total returned values, the assumption is met.

Also, the researcher could not control other independent variables such as teacher variance; but it was noted that the research school used common curriculum and assessments during the 2017-2018 school year (Anonymous, personal communication, January 11, 2018).

Third, this study only reviewed data at one school site during one academic year. There are many OST programs operating at schools throughout the state of South Carolina and nationwide that could be included in the study to provide a larger sample size for each category. Also, longitudinal data could have been reviewed at the research site following the same students over the course of multiple academic years for a stronger longitudinal data set.

Next, the gathered attendance data does not account for absences due to extenuating circumstances, chronic medical or personal absences. There could be a handful of cases where there is an identified medical condition and instruction is received on a limited basis, such as intermittent homebound services. Students who were counted

absent may have received some instruction.

Finally, there are many qualitative factors that could have influenced the study. The 21st CCLC after-school program is not the only intervention used to improve the graduation rate at the school studied. This study does not account for other interventions that could have taken place nor does it account for other qualitative factors such as motivation or student and/or adult perceptions of the 21st CCLC program could have negatively impacted the observed outcomes.

Implications and Recommendations

At the federal and state level, the implication for leadership from this study is for organizational leaders to consider varied ways to apply finite resources to assist at-risk students and not limiting themselves strictly to the OST model. Because of the results of this research study, coupled with the other studies completed on 21st CCLC OST programs such as Dynarski, et al.(2003) and White and Whisman (2014), there is noted an inconclusive impact on the academic, attendance, and disciplinary outcomes of at-risk students.

The study also supported the federal teacher survey conducted in 2016 which found the program had a limited impact on attendance and classroom behavior. Only 17% of teachers in that survey indicated the students in the program showed improved attendance and behavior. Finally, this research study further supported the National program review by Dynarski, et al. (2003), which showed limited program impact across a national sample of 5000 elementary and middle school students. This study's results imply this program does not positively impact at-risk students' academic achievement, attendance, and behavior. The study further asserts that the main elements of this

program need to be reviewed and realigned to the OST strategies highlighted in the literature review by Beckett (2009) and Huang, et al. (2010), including connection to the school day as well as meeting individual student needs.

At the federal level, the researcher would recommend that the Federal Department of Education consider diversifying its after-school funds and not place all of the federal funds for after-school programs into the 21st CCLC program. This recommendation is based on the results from this study included in the research base that currently exists on the 21st CCLC program. Currently, $1.212 billion is allocated to the 21st CCLC program, which is distributed based on population to be awarded by states. This number is currently slated to be held constant for the 2019 budget year, serving an expected 1.7 million students (Afterschool Alliance, 2018).

There are two recommendations for the local educational agency and 21st CCLC program. The first recommendation would be for the 21st CCLC program to implement practices based upon two of the six principles of the Expanded Learning Theory: school-community partnerships and engaged learning (Expanded Learning and Afterschool Project, 2012). Implementing best practices in school-community partnerships would allow for students to create a connection between their current school setting and the world at-large to connect them to paths after high school as well as improve upper grade attendance. Applying best practice in the area of engaged learning would encourage better attendance as well as assist to improve academic outcomes for students that attend the 21st CCLC program.

Secondly, because this study further reinforced the mandated CIPAS evaluations of 2012-13 -- the program performed below the state average in all areas and the lowest

level in program evaluation-- the researcher would also recommend the local education agency conduct a full program evaluation, including both quantitative and qualitative elements, utilizing the results to adjust the program to maximize its impact on vulnerable student outcomes.

There are four additional recommendations for future study. First, future research should incorporate a qualitative aspect to provide depth and a rationale for the quantitative data. Second, the researcher would recommend reviewing longitudinal data beginning in the middle grades to determine the impact over time of multiple years of the 21st CCLC program. Also, future research should include case studies with extreme at-risk cases to identify the best strategies to impact the outcomes for those students most at risk of not graduating. Finally, the researcher would recommend controlling for more demographic data to determine the program's level of effectiveness across different subsections of students.

Conclusions

This quantitative research study explored the effect of a 21st CCLC program on at-risk student academic progression, attendance, and disciplinary incidents. From the analysis of the data, it is proposed the 21st CCLC program had no impact on students who attended the program on the variables studied when compared to other at-risk students who did not attend the program. The goal was to establish a relationship between attending a 21st CCLC after-school program and an improved academic progression rate, a better attendance rate, and less disciplinary referrals. The findings in this study do not support the assertion that attendance in a 21st CCLC after-school program has a statistically significant impact on the academic, attendance, and behavioral outcomes of

at-risk students. The goal of the different interventions employed at the various levels of school systems is to improve the outcome for the most vulnerable students. Based on this research study, it can be concluded that the local program may need to explore other options to maximize the impact on its at-risk students.

References

21st Century Grant Services. (2016). 2015-2016 quantitative evaluation report. Port Orange, FL: 21st Century Grant Services. Retrieved from https://ed.sc.gov/districts-schools/student-intervention-services/21st-century-community-learning-centers/2016-sc-quantitative-report/

20 U.S.C. §§ 7171-7176. (2015). Retrieved from https://www.law.cornell.edu/uscode/text/20/7171

34 C.F.R. §200.19(b) (1) (i)-(iv). (2017). Retrieved from https://www.law.cornell.edu/cfr/text/34/200.19

Afterschool Alliance. (2018). Budget analysis of 21st Century Community Learning Centers (21st CCLC) funding levels—Updated October 2018. Retrieved from http://afterschoolalliance.org/documents/21stCCLC-budget-chart-Oct2018.pdf

Allensworth, E. M., & Easton, J. Q. (2007). What matters for staying on-track and graduating in Chicago public high schools: A close look at course grades, failures, and attendance in the freshman year. research report. *Consortium on Chicago School Research.* Retrieved from https://eric.ed.gov/?id=ED498350

Alston, F. K. (2010). *Latch key children.* New York, NY: NYU Child Study Center. Retrieved from https://www.como.gov/parksandrec/wp-content/uploads/sites/25/2017/09/latch-key-children-education-2010.pdf

Amos, J. (2008). Dropouts, diplomas, and dollars: U.S. high schools and the nation's economy. *Alliance for Excellent Education.* Retrieved from http://www.all4ed.org/files/Econ2008.pdf

Arcia, E. (2006). Achievement and enrollment status of suspended students: Outcomes in a large, multicultural school district. *Education and Urban Society, 38*(3), 359-369. doi:10.1177/0013124506286947

Balfanz, R., Byrnes, V., & Fox, J. (2014). Sent home and put off-track: The antecedents, disproportionalities, and consequence of being suspended in the ninth grade. *Journal of Applied Research on Children, 5*(2), 1-19.

Balfanz, R., Herzog, L., & Mac Iver, D. J. (2007). Preventing student disengagement and keeping students on the graduation path in urban middle-grades schools: Early identification and effective interventions. *Educational Psychologist, 42*(4), 223-235. doi:10.1080/00461520701621079

Beckett, M. K. (2009). *Structuring out-of-school time to improve academic achievement.* Washington DC: National Center for Educational Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Bell, C. J. (2013). *Role of an afterschool program on students graduating high school: A focus on lived experiences.* Lynchburg, VA: Liberty University.

Bruce, M., Bridgeland, J. M., Fox, J. H., & Balfanz, R. (2011). On track for success: The use of early warning indicator and intervention systems to build a grad nation. Retrieved from https://eric.ed.gov/?id=ED526421

Burkhardt, K. M. W. (2009). *The effect of out-of-school suspension on the academic achievement of secondary students.* Available from ProQuest Central; ProQuest Dissertations & Theses Global: The Humanities and Social Sciences Collection. (885652460)

Chang, H. N., & Romero, M. (2008). *Present, engaged, and accounted for: The critical importance of addressing chronic absence in the early grades.* National Center for Children in Poverty. Retrieved from https://eric.ed.gov/?id=ED522725

DePaoli, J. L., Balfanz, R., & Bridgeland, J. (2016). *Building a grad nation: Progress and challenge in raising high school graduation rates. Annual update 2016.* Baltimore, MD: Civic Enterprises.

Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45*(3-4), 294-309.

Dynarski, M., Moore, M., Mullens, J., Gleason, P., James-Burdumy, S., Rosenberg, L., … Levy, D. (2003). *When schools stay open late: The national evaluation of the 21st-century community learning centers program. First year findings.* Princeton, NJ: Mathematica Policy Research. Retrieved from https://eric.ed.gov/?id=ED473230

Education Reform Glossary. (2013a). *The glossary of educational reform*. At-risk. Great Schools Partnership. Portland, ME. Retrieved from https://www.edglossary.org/at-risk/

Education Reform Glossary. (2013b). *The glossary of educational reform*. Cohort. Great Schools Partnership. Portland, ME. Retrieved from https://www.edglossary.org/cohort/

Every Student Succeeds Act of 2015, Pub. L. No. 114-95 § 114 Stat. 1177 (2015-2016).

Expanded Learning and Afterschool Project. (2012). *Expanded learning and afterschool project: Affordable, sustainable approached powered by school-community partnerships.* Retrieved from https://www.expandinglearning.org/docs/ProjectBrochure_May2012.pdf

Franke, T. M., Ho, T., & Christie, C. A. (2012). The chi-square test: Often used and more often misinterpreted. *American Journal of Evaluation, 33*(3), 448-458. Retrieved from https://doi.org/10.1177/1098214011426594

French, M. T., Homer, J. F., Popovici, I., & Robins, P. K. (2015). What you do in high school matters: High school GPA, educational attainment, and labor market earnings as a young adult. *Eastern Economic Journal, 41*(3), 370-386. doi:10.1057/eej.2014.22

Gansle, K. A., & Noell, G. H. (2008). Consulting with teachers regarding academic skills: Problem solving for basic skills. *International Journal of Behavioral Consultation & Therapy, 4*(2), 199-211.

Gao, J., Hallar, B., & Hartmann, T. A. (2014). *A snapshot of OST programs in Philadelphia: An evaluation of eleven 21st century community learning center grantees.* Philadelphia, PA: Research for Action. Retrieved from https://eric.ed.gov/?id=ED553131

Gayl, C. L. (2004). *After-school programs: Expanding access and ensuring quality. PPI policy report.* Progressive Policy Institute. Retrieved from https://eric.ed.gov/?id=ED491206

Ginsburg, A., Jordan, P., & Chang, H. (2014). *Absences add up: How school attendance influences student success.* Attendance Works. Retrieved from http://www.attendanceworks.org/wp-content/uploads/2017/05/Absenses-Add-Up_September-3rd-2014.pdf

Hemphill, S. A., Plenty, S. M., Herrenkohl, T. I., Toumbourou, J. W., & Catalano, R. F. (2014). Student and school factors associated with school suspension: A multilevel analysis of students in Victoria, Australia and Washington State, United States. *Children & Youth Services Review, 36*, 187-194. doi:10.1016/j.childyouth.2013.11.022

Holstead, J., King, M. and Miller, A. (2015). Research-based practices in afterschool programs for high school youth. *After School Matters, 12*(2). Retrieved from https://eric.ed.gov/?id=EJ1063849

Huang, D., Cho, J., Mostafavi, S., Nam, H. H., Oh, C., Harven, A., & Leon, S. (2010). *What works? Common practices in high functioning afterschool programs across the nation in math, reading, science, arts, technology, and homework--A study by the national partnership. the afterschool program assessment guide. CRESST report 768.* National Center for Research on Evaluation, Standards, and Student Testing (CRESST). Retrieved from https://eric.ed.gov/?id=ED512654

James-Burdumy, S., Dynarski, M., Moore, M., Deke, J., Mansfield, W., & Pistorino, C., (2005). *When schools stay open late: The national evaluation of the 21st Century Community Learning Centers program. Final report.* Washington, DC: U.S. Department of Education.

Kinsler, J. (2013). School discipline: A source or salve for the racial achievement gap? *International Economic Review, 54*(1), 355-383. doi:10.1111/j.1468-2354.2012.00736.x

Kremer, K. P., Maynard, B. R., Polanin, J. R., Vaughn, M. G., & Sarteschi, C. M. (2015). Effects of after-school programs with at-risk youth on attendance and externalizing behaviors: A systematic review and meta-analysis. *Journal of Youth and Adolescence, 44*(3), 616-636.

Lazarus, P. J., & Ortega, P. (2007). Universal pre-kindergarten in conjunction with universal screenings: An antidote to grade retention. *Journal of Educational Research & Policy Studies, 7*(1), 54-75.

Lee, T., Cornell, D., Gregory, A., & Fan, X. (2011). High suspension schools and dropout rates for Black and White students. *Education and Treatment of Children,* 167-192. Retrieved from https://eric.ed.gov/?id=EJ920359

Ma, J., Pender, M. & Welch, M. (2016). *Education pays 2016: The benefits of higher education for individuals and society. trends in higher education series.* New York, NY: College Board. Retrieved from https://eric.ed.gov/?id=ED572548

McCallumore, K. M., & Sparapani, E. F. (2010). The importance of the ninth grade on high school graduation rates and student success. *Education Digest, 76*(2), 60-64.

McFarland, J., Stark, P., & Cui, J. (2016). *Trends in high school dropout and completion rates in the united states: 2013. compendium report. NCES 2016-117.* Washington, DC: National Center for Education Statistics.

National Center for Educational Statistics. (2016). *Digest of educational statistics. Table 219.46 Public high school 4-year adjusted cohort graduation rate (ACGR), by selected student characteristics and state: 2010-11 through 2014-15.* Retrieved from https://nces.ed.gov/programs/digest/d16/tables/dt16_219.46.asp

Paluta, L. M., Lower, L., Anderson-Butcher, D., Gibson, A., & Iachini, A. L. (2015). Examining the quality of 21st century community learning center after-school programs: Current practices and their relationship to outcomes. *Children & Schools, 38*(1), 49-56. Retrieved from http://doi.org/10.1093/cs/cdv040

Pederson, L. , DeKanter, A. , Bobo, L. M. , Weinig, K. , & Noeth, K. (1998). *Safe and smart: Making after-school hours work for kids.* Washington, DC: U.S. Department of Education.

Pleis J. R., Ward, B. W., & Lucas J. W. (2010). Summary health statistics for U.S. adults: National Health Interview Survey. Vital and Health Statistics, Series 10, No. 249. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. DHHS publication No. (PHS) 2011-1577. Retrieved from http://www.cdc.gov/nchs/data/series/sr_10/sr10_249.pdf

Ready, D. D. (2010). Socioeconomic disadvantage, school attendance, and early cognitive development: The differential effects f school exposure. *Sociology of Education, 83*(4), 271-286. doi:10.1177/0038040710383520.

Roderick, M., Kelley-Kemple, T., Johnson, D. W., & Beechum, N. O. (2014). *Preventable failure: Improvements in long-term outcomes when high schools focused on the ninth grade year. Research summary.* Chicago, IL: University of Chicago Consortium on Chicago School Research.

Roth, J. L., Malone, L. M., & Brooks-Gunn, J. (2010). Does the amount of participation in afterschool programs relate to developmental outcomes? A review of the literature. *American Journal of Community Psychology, 45*(3-4), 310-324.

Rupert, D., & Towle, T. (2013). South Carolina 21st CCLC 2013 continuous improvement processes for after school (CIPAS) report. Retrieved from https://ed.sc.gov/scdoe/assets/file/programs-services/1/documents/2012-13-CLCC-ContImproveRpt.pdf

Salinger, R. L. (2016). Selecting universal screening measures to identify students at risk academically. *Intervention in School and Clinic, 52*(2), 77-84.

South Carolina School Report Card. (2017). Retrieved from https://ed.sc.gov/data/report-cards/historic-school-report-cards/2017/

Southern Regional Education Board. (2002). *Opening doors to the future: Preparing low-achieving middle grades students to succeed in high school. 2002 outstanding practices.* Southern Regional Education Board. Retrieved from https://eric.ed.gov/?id=ED469956

U.S. Department of Education. (2016). Chronic absenteeism in the nation's schools. Retrieved from https://www2.ed.gov/datastory/chronicabsenteeism.html

U.S. Department of Education, International Affairs Office. (2008). Structure of the U.S. education system: Credit systems. Retrieved from https://www2.ed.gov/about/offices/list/ous/international/usnei/us/credits.doc

U. S. Department of Education, Office of Civil Rights. (2016).Tabulations. Retrieved March 24, 2018, from https://www2.ed.gov/about/offices/list/ocr/reports-resources.html

U.S. Department of Labor, Bureau of Labor Statistics. (2014). Tabulations. Retrieved March 1, 2018, from http://www.bls.gov/cps/aa2014/cpsaat07.htm

Utah Education Policy Center. (2012). *Research brief: Chronic absenteeism.* Salt Lake City: University of Utah. Retrieved from https://www.schools.utah.gov/file/31291767-087c-4edb-8042-87f272507c1d

White, L., & Whisman, A. (2014). *21st Century Community Learning Centers 2014: A quasi-experimental investigation of program impacts on student achievement in mathematics and reading/language arts.* Charleston, WV: West Virginia Department of Education.

Appendix A

Letter of Consent to Conduct Research

July 12, 2018

Adam Lanford
2928 Grand Route Saint John Street
New Orleans, LA 70119

SUBJECT: Letter of Consent

Mr. Lanford,

You have been granted permission to collect data relating to the 21st Century Community Learning Center grant for 2017-18.

If you have any questions or need further information, please feel free to contact me.

Sincerely,

Superintendent

Friday, July 13, 2018

Dear Sir or Madam:

Please consider this a letter of consent allowing Mr. Adam Lanford to collect data on our 21st Century Grant Program. Mr. Lanford will be looking at the data of at-risk students who attended our after-school program and he will also be looking at the data of at-risk students who did not attend our after-school program for at least 10 days.

His intent is to see how attending (or not attending) our after-school program affected these students' academic progression, attendance, and disciplinary events.

If you should need further information, please do not hesitate to contact me either by phone or email.

Sincerely,

principal

Appendix B

Identified At-risk Student Achievement, Attendance, and Disciplinary Data

Did Not Attend 21st CCLC program			
Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
9	9	12	0
11	8.5	0	0
9	8.5	0	0
11	8.5	0	0
11	8	0	0
10	8.5	24	0
11	7.5	12	0
9	8.5	0	0
9	8.5	0	0
9	8.5	0	2
11	7.5	0	0
11	9	0	0
11	8.5	0	0
11	8.5	0	0
11	8.5	0	0
11	8.5	7	0
11	7.5	0	0
11	8.5	0	0
11	7	0	0
11	8.5	0	0
11	5.5	0	0
11	8.5	0	1
11	9.5	5	1
11	8.5	0	0
10	8	0	0
10	8.5	50	0
10	9	0	0
10	9.5	0	0
10	8.5	0	0
10	8	0	0
10	7.5	29	0
10	7.5	15	0
9	8.5	5	0
9	8.5	0	2
10	8.5	0	0
11	8.5	27	0
10	8.5	0	0
11	8.5	7	0
10	5.5	0	0
12	8.5	0	0
11	8.5	0	3

Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
11	6	0	2
10	8.5	26	0
10	7	37	0
9	8.5	17	0
11	8	0	0
9	8.5	0	1
11	8.5	33	0
9	2	66	0
11	8.5	18	0
11	8.5	5	0
11	8.5	0	0
11	8.5	0	1
11	7.5	0	0
11	7	33	0
11	4	9	0
11	7.5	0	0
11	2	55	4
11	8.5	5	0
11	6.5	0	0
10	7.5	0	2
11	8.5	0	0
10	8.5	10	0
10	8.5	11	0
10	9	0	0
10	8	9	1
10	8.5	0	0
10	9	0	0
10	8.5	16	0
10	9	0	0
10	7.5	0	0
10	8.5	0	0
10	8.5	0	0
10	8.5	0	0
11	7.5	0	0
9	8.5	0	1
9	8.5	0	2
9	6.5	1	4
11	8.5	0	0
11	7.5	4	0
11	9	0	0
10	7.5	14	0
10	8.5	0	0
10	8.5	14	0

Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
11	8.5	0	0
11	7.5	0	1
9	8.5	7	2
9	8.5	0	0
11	8.5	0	0
10	8	15	0
9	4	2	0
11	7.5	4	0
11	8.5	17	0
11	9.5	0	0
11	8.5	0	0
11	8.5	0	0
11	8.5	0	0
11	6.5	0	0
9	5.5	0	0
11	7.5	0	0
10	8.5	0	0
9	8.5	0	0
10	5.5	0	0
9	5.5	27	3
10	8.5	0	0
10	8.5	6	2
10	8.5	0	2
9	8.5	0	6
9	8	1	0
9	8.5	0	3
9	8.5	0	0
11	8.5	33	1
11	8	0	2
9	0.5	24	4
11	8.5	0	0
11	8.5	0	0
11	7.5	0	0
10	8.5	0	0
10	7.5	0	0
10	2.5	0	0
10	9	0	0
11	8.5	0	0
10	8.5	0	0
10	8.5	0	0
9	8.5	0	1
9	8	0	0

Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
9	8	0	0
10	8.5	14	0
11	8.5	7	0
11	8.5	0	1
9	7.5	20	0
9	8	0	0
9	5.5	16	0
9	7.5	0	0
9	8	0	4
11	8.5	16	0
9	8.5	0	1
9	8	4	0
10	8.5	0	0
11	5.5	0	1
10	8.5	9	0
12	8.5	0	0
10	8.5	0	0
10	8.5	0	0
11	8.5	19	0
9	7.5	0	0
9	8.5	27	2
9	8.5	13	0
9	8	10	5
11	7.5	0	0
10	8	0	0
11	8	0	0
11	7.5	0	0
10	9	0	0
10	8.5	16	0
11	8.5	0	1
9	6	0	3
9	3.5	43	0
10	9	0	0
10	7.5	12	2
9	8	0	1
9	8.5	17	0
10	4	43	2
9	9	0	0
10	8.5	17	0
10	5	6	4
10	8.5	0	0
11	7.5	0	0
11	6.5	0	0
11	8	0	0

Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
9	8.5	0	1
11	8.5	11	2
10	6.5	24	4
9	8.5	13	1
11	6.5	0	0
11	7.5	0	0
10	7.5	13	1
10	5.5	0	0
11	8.5	4	0
9	8.5	0	0
10	8.5	0	0
9	8.5	0	0
9	8	0	5
10	8.5	0	0
11	8.5	0	0
9	8.5	19	0
9	8.5	0	0
11	4.5	48	0
10	5.5	0	1
9	8.5	0	0
11	8.5	0	0
10	4	48	0
9	1.5	1	1

Attended 21st CCLC Program at least ten days			
Student Grade	Earned Credit Hours	Total Absences	Disciplinary Events
10	9	0	0
11	8.5	36	0
11	8.5	5	0
11	8.5	0	2
11	8.5	0	0
11	8.5	0	0
10	8.5	14	0
10	8.5	4	0
10	8.5	1	3
10	8.5	0	0
10	8.5	0	0
10	8.5	0	0
10	8.5	0	0
10	8.5	0	1
10	8.5	0	0
10	8.5	0	0
10	8.5	0	0
9	8.5	20	0
9	8.5	18	4
9	8.5	18	0
9	8.5	16	1
9	8.5	0	1
9	8.5	0	0
9	8.5	0	0
9	8.5	0	2
9	8.5	0	0
9	8.5	0	1
11	8	0	0
10	8	0	0
10	8	0	0
9	8	0	0
10	7.5	17	0
10	7.5	0	0
9	7.5	28	6
11	7	12	1
11	5.5	0	0
10	5.5	0	0
9	5	25	0

Appendix C

Academic Progression χ^2 Analysis

	Academic		
	Attended	**DNA**	
8+	31 *27.31* (0.50)	135 *138.69* (0.10)	**166**
Less than 8	7 *10.69* (1.28)	58 *54.31* (0.25)	**65**
	38	**193**	**231**

χ^2 = 2.124, df = 1, χ^2/df = 2.12 , P(χ^2 > 2.124) = 0.1450

expected values are displayed in *italics*
individual χ^2values are displayed in (parentheses)

Appendix D

Attendance χ^2 Analysis

	Attendance		
	Attended	**Did not attend**	
Five or Less	27 *26.48* (0.01)	134 *134.52* (0.00)	**161**
6-17	5 *6.74* (0.45)	36 *34.26* (0.09)	**41**
18+	6 *4.77* (0.32)	23 *24.23* (0.06)	**29**
	38	**193**	**231**

χ^2 = 0.931, df = 2, χ^2/df = 0.47, P(χ^2 > 0.931) = 0.6277

warning: some observed or expected frequencies are less than 5; thus the Central Limit Theorem may not apply and the resultant χ^2 may be invalid

expected values are displayed in *italics*
individual χ^2values are displayed in (parentheses)

Appendix E

Disciplinary Events χ^2 Analysis

	Disciplinary		
	Attended	**DNA**	
0 Events	28 *28.95* (0.03)	148 *147.05* (0.01)	**176**
1 +	10 *9.05* (0.10)	45 *45.95* (0.02)	**55**
	38	**193**	**231**

$\chi^2 = 0.157$, df = 1, χ^2/df = 0.16 , $P(\chi^2 > 0.157) = 0.6915$

expected values are displayed in *italics*
individual χ^2values are displayed in (parentheses)