ABSTRACT

Bryan A. Ruffin, THE EFFECTS OF SCHOOL BASED INTERVENTION PROGRAMS ON STUDENT ACHIEVEMENT AT A NORTHEASTERN NORTH CAROLINA EARLY COLLEGE HIGH SCHOOL (Under the direction of Dr. William Rouse). Department of Educational Leadership, May 2018.

The purpose of this study was to examine the effects of four school-based programs on student academic performance at an early college high school in northeastern North Carolina. The four school-based intervention programs that were examined in this study are as follows: mandatory Study Hall for all students in Grades 9-13, an ACT/SAT Prep course for students in Grade 11, a College Success course for all students in Grades 9-13 who earn a D or F grade in a college course which focuses on college prep skills for students, and an Advisory Period for all students in grades 9-13. Standardized test results were analyzed after the school based intervention programs had been implemented at the school in the study to determine the impact of these four interventions. The national assessment that was used to measure effectiveness was the American College Testing (ACT) assessment. All four programs were designed to help increase student achievement and provide students with skills to be successful during high school and college upon graduating from high school as measured by state and national assessments. The school's performance grading indicators were evaluated using the 2014-2015 and 2015-2016 academic year school data to determine the overall effectiveness of the four school-based intervention programs. The study concluded that there were gains in several areas with the interventions at the school in the study. There were some circumstances beyond the control of the intervention programs, which would have been a major factor in determining overall program effectiveness.

THE EFFECTS OF SCHOOL BASED INTERVENTION PROGRAMS ON STUDENT ACHIEVEMENT AT A NORTHEASTERN NORTH CAROLINA EARLY COLLEGE HIGH SCHOOL

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by

Bryan A. Ruffin

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THE EFFECTS OF SCHOOL BASED INTERVENTION PROGRAMS ON STUDENT ACHIEVEMENT AT A NORTHEASTERN NORTH CAROLINA EARLY COLLEGE HIGH SCHOOL

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DEDICATION

This dissertation is dedicated to all the change agents who strive daily to make a difference in the world in which we live. It takes all of us working together to make the world a better place. I also dedicate this work to others who are striving to better themselves, whether it be through advancing one's education or seeking opportunities to make a greater impact on the world. Thank you for your hard work and tireless efforts. I also dedicate this dissertation to educators who labor tirelessly to educate tomorrow's leaders. Your work is not in vain. To my former teachers and mentors, I also dedicate this work to you.

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CHAPTER 1: INTRODUCTION

Students feeling unprepared for post high school is not a new concern for students, parents, educators, business owners, and community stakeholders at national, state, and local levels. YouthTruth was launched in 2008 by the Center for Effective Philanthropy and the Bill and Melinda Gates Foundation with the goal of better measuring school reforms from the perspective of students. According to EdSource's college and career reporter, Fermin Leal (2015), only 45% of students feel positive about their college and career readiness. Out of the 165,000 students surveyed, this leaves 55% of students who do not feel positive about their college and career readiness. The survey results further indicate 87% of the students actually have plans to attend a college or university upon graduating from high school although a disproportionate number of students feel unprepared for postsecondary education.

According to an article entitled *Did You Know?* by North Carolina's Hunt-Institute, which focuses on securing our country's future, approximately 18% of public and non-public high school students took the ACT in 2011 and earned an average ACT score of 21.9 (out of 36 possible points). Although North Carolina's average on the ACT outpaced the national average for a fourth consecutive year, only one third of the students who took the ACT scored at the college-ready level in each of the four content areas (Did you know?, 2011). Therefore, the Career and College Promise initiative was created to better prepare students for college upon graduating from high school.

According to Early College Designs: Program Description and Scaling Plan (2011), Early Colleges initially began through the middle college or small school movement. In the 1970s, middle college high schools were established on college campuses with support from the Ford Foundation. These high schools formed partnerships with the colleges on whose campuses they

were located and encouraged students to continue their education by exposing them to a college-going culture. The small schools movement was a reform initiative that established small, student-centered schools in dense urban areas with the goal of improving student outcomes utilizing strategies such as smaller classes and more comprehensive student supports. Early College Designs adopt the key, evidence-based practices of each of these movements—forming postsecondary partnerships and maintaining a student-centered school environment—and combine them with other strategies to ensure student success. At the core of the model was that every student was expected to enroll in college courses while still in high school (known as "dual enrollment"), and the schools support them in doing so. This expectation—that most students, not just advanced students, can succeed in a challenging pathway leading to significant, transferable college credit while in high school—distinguishes the Early College movement from other education transformation efforts (Jobs for the Future, 2011).

Berger, Turk-Bicakci, Garet, Song, Knudson, Haxton, and Zeiser (2013) stated that in 2002, the Bill and Melinda Gates Foundation launched the Early College High School Initiative with the primary goal of increasing the opportunity for underserved students to earn a postsecondary credential. To achieve this goal, Early Colleges provided underserved students with exposure to, and support in, college while they are in high school. Early Colleges partner with colleges and universities to offer all students an opportunity to earn an associate's degree or up to two years of college credits toward a bachelor's degree during high school at no or low cost to the students. Since 2002, more than 240 Early Colleges have opened nationwide (Berger et al., 2013). According to Marie Groark of the Bill and Melinda Gates Foundation, the foundation donated nearly $30 million dollars in grants to eight organizations to expand the early college network in more than twenty-five states (Groark, 2017). In addition to the Bill and Melinda

Gates Foundation, Early college designs: Program description and scaling plan (2011) also credit the following organizations with the initial funding of Early Colleges: Carnegie Corporation of New York, the Ford Foundation, the W.K. Kellogg Foundation, the Dell Foundation, Lumina Foundation for Education, the Walton Family Foundation, and other local foundations (Early college designs: Program description and scaling plan, 2011).

Early College High School Director Jacob Tiemann--located in the rural Texas Roscoe Collegiate Independent School District, shared that in their community, students are no longer wondering whether or not they will be admitted into the college of their choice, but are now questioning which college they will attend? Roscoe also stated that prior to implementing the early college model, the district faced teacher recruitment and student enrollment challenges. As a result of adopting the early college model, early college graduates are now able to apply for area jobs after they graduate from high school. Additionally, only about 10% of graduates will not have their associate's degree when they graduate from high school (Pannoni, 2016).

Bard College joined forces with the first private, residential early college called Simon's Rock in 1979 to form the first Bard High School Early College, which opened in 2001, and is located in Manhattan, New York. Like other early colleges, BHSEC allows students to earn an associate of arts degree and a high school diploma (Bard Early Colleges, 2017).

Former president of North Carolina New Schools Tony Habit stated, "Last year, half our early-college high schools had zero dropouts, and that's just unprecedented for North Carolina, where only 62% of our high school students graduate after four years. While North Carolina leads the way in early-college high schools, the model was spreading in California, New York, Texas and elsewhere. These schools are seen as a promising approach to reducing the high

school dropout rate and increasing the share of degree holders — two major goals of the Obama administration" (Lewin, 2010).

According to Berger, Turk-Bicakci, Garet, Song, Knudson, Haxton, and Zeiser (2013), the Bill and Melinda Gates Foundation spearheaded a large portion of the funding for Early Colleges initially. According to Article 16 of the North Carolina General Assembly state statute 115C-238.54, effective January 1, 2012, The State Board of Education shall reimburse The University of North Carolina for tuition for courses taken by students at cooperative innovative high schools that have a constituent institution of The University of North Carolina as their partner institution of higher education and were approved under G.S. 115C-238.51A(c). The North Carolina General Assembly has continued to support Early Colleges because of their consistent records in producing students who are more likely to attend college, because of the structures and high levels of support that exist in Early Colleges as noted in Early College's data as reported on state and national assessments. Although Early College funding was and continues to be a concern for stakeholders, the North Carolina General Assembly continues to make Early Colleges a top priority in educating its students and preparing students who are college and/or career ready (Article 16. Optional Programs, 2016).

According to Joel Vargas (2018), Early College Designs enable more students, particularly low-income and minority students, to experience rigorous high school and college coursework that leads to improved outcomes. Early college students are outperforming their peers nationwide. Some of the data points are as follows:

- 90% of early college students graduate from early college high school vs. 78% of students nationally who attend traditional high schools
- 94% of early college students earn free college credit while in high school

- 30% of early college students earn an Associate's degree or other postsecondary credential while in high school (Joel Vargas, 2018)

Problem of Practice

Although funding has been and continues to be a major topic of discussion for early college stakeholders, the problem of practice in this study was to examine the student academic performance following the four school-based intervention programs in an early college high school in northeastern North Carolina. The school based intervention programs that were studied are as follows: mandatory Study Hall for all students in Grades 9-13, an ACT/SAT Prep course for students in Grade 11, a College Success course for all students in Grades 9-13 who earn a D or F in a college course which focuses on college prep skills for students, and an Advisory Period for all students in grades 9-13.

Standardized test results were reviewed after the school based intervention programs were implemented at the Early College High School in this study to determine if these programs impacted student achievement as measured by standardized test scores on local, state and national assessments. Data was collected in this study for two academic school years. Those two academic school years were 2014-2015 and 2015-2016. The assessments that were examined to determine the effectiveness of the four school based programs were benchmark assessments, and teacher assigned grades in college and high school courses. The national assessments that were used to measure effectiveness was the American College Testing (ACT) assessment. All four school-based programs were designed to help increase student achievement and provide students with skills to be successful during high school and college.

Setting and Population

As seen across America and in the state of North Carolina, there is a need to help better prepare students for postsecondary education. This phenomenon also exists in the Hertford County Public School system. According to the 2016 United States Census, Hertford County has a population estimate of 24,136. In 2015, the racial breakdown for Hertford County was: 60.3% African American, 35.6% White, 1.3% American Indian, and .9% Asian. In 2015, there are a total of 495 employer establishments and the median household income is $33,008. During the same year, 26.9% of residents are impoverished; 79.9% of residents had obtained a high school diploma and 14.0% had obtained a bachelor's degree or higher and at least twenty-five years old or older (United States Census Bureau, 2016).

Hertford County is comprised of seven public schools, including: Bearfield Primary School, Ahoskie Elementary School, Riverview Elementary School, Hertford County Middle School, C.S. Brown High STEM High School, Hertford County Early College High School, and Hertford County High School. The district has a total of 2,899 students during the 2015-2016 with some fluctuations due to students moving in and out of the district over the course of the school year (Data and Reports-Student Accounting, 2017).

The schools in Hertford County have the following school performance grades as of 2015-2016 (see Table 1).

Study School Demographics

The school is located in rural northeastern North Carolina. The school is housed on the campus of a local community college which serves as the school's Institution of Higher Education (IHE) partner. The community college provides college courses to the Early College students in various methods. Courses are offered either face-to-face, online, or as hybrids.

Table 1

Summary of Hertford County Public School Performance Grade and EVAAS Status 2015-2016

Schools	Grade	EVAAS Growth Status
Bearfield Primary School	C	Met
Ahoskie Elementary School	D	Met
Riverview Elementary School	D	Met
Hertford County Middle School	F	Not met
C. S. Brown High School-STEM	C	Met
Hertford County Early College	B	Exceeded
Hertford County High School	C	Exceeded

Note. The table illustrates the School Performance Grade assigned to each school in the Hertford County Public Schools district for the 2015-2016 school year and whether or not the school did not meet, met, or exceeded expected EVAAS growth, as adopted from the North Carolina Department of Public Instruction accountability website.

Hybrid courses require that students attend the class face-to-face once a week. The remaining assignments are submitted online throughout the week. According to the Public Schools of North Carolina (2018) Testing and Accountability Results website, using North Carolina's current School Performance Grading System for 2015, the one primary and two elementary schools currently had a grade of D, the middle school had a grade of F, the STEM High School and traditional high school had a grade of C, and the Early College High School had a grade of B (Public Schools of North Carolina). Although North Carolina's School Performance Grading System affects all seven schools in the local education agency, this study focuses solely on the Early College High School.

The Early College High School had a population of 118 students in 2014-2015 and increased its population to 142 students in 2015-2016. The school serves grades nine through thirteen. The thirteenth year is an optional, additional year for students to complete remaining associate's degree and high school diploma graduation requirements. Students who choose to return for Grade 13 typically only have one or two high school classes and as many as eight college courses. Students who wish to take more than the allotted number of hours must receive special permission from the school's principal and Dean of Student Support Services and/or Dean of Academic Affairs. All students receive a free laptop, laptop carrying case, free high school and college course tuition, textbooks, and access codes. Students are also able to earn Work Readiness certifications through the national ACT Workkeys Assessment.

There is a formal admission process for students to be admitted into the school. Students must be current 8th grade students in order to apply. Prospective students are required to submit the following: an application, three letters of teacher recommendation from current or past teachers, behavior and attendance records, and a copy of their most recent report card after which

the student and their parent are required to attend an interview. During the interview, information about the school is shared with parents and after a series of questions are asked to both the student and parent, the student is required to write an essay on a topic which has been provided to the student prior to the day of the interview. Students are notified in writing if they are accepted after the interview. Parents who do not attend the interview or make an attempt to reschedule the interview automatically disqualify their child from being admitted into the school since parental involvement directly correlates to student achievement at the school. Selected students must fit one of the three criteria in order to be admitted into the school in the study: be on free and/or reduced lunch, be a first generation college student, or be at risk of dropping out of high school. After all student interviews are completed, the school's staff reconvenes and utilizes all components of the student's interview responses and essay to determine if the student should be selected to participate in the program.

Students can participate in an array of clubs during monthly club days, including: Beta, Future Business Leaders of America, American Literacy Education, Sports, Debate, Robotics, Spanish, Video Games, Yearbook, and Music. Students can also participate in sports, including: football, basketball, baseball, golf, soccer, volleyball, track, and cross-country. Many students also hold part-time jobs after school which hinders some students from being able to successfully complete their assignments on time. Students also note that procrastination is a problem for many of the students at the school.

Study Questions

There are four study questions associated with this study. The study questions are as follows:

1. Does the Advisory Period impact student academic performance based on teacher assigned grades at the school in the study?
2. Does the ACT Prep course impact student academic performance as measured by the ACT assessment at the school in the study?
3. Does the Study Hall Period impact student academic performance based on teacher assigned grades at the school in the study?
4. Does the College Success 101 course impact student academic performance as measured by the college course assigned teacher grades at the school in the study?

Study Design

An internal, summative program evaluation was utilized for the purpose of this study. The school principal during the time of the study and principal investigator, reviewed several indicators in the school's School Performance Grade data report over two consecutive academic years (2014-2015 and 2015-2016) to measure the effectiveness of the four school based intervention programs that were implemented to help raise student achievement on state and national assessments, as well as in high school and college courses. The internal program evaluation will help stakeholders determine if the school based intervention programs raise student achievement or if alternative programs are needed to improve the selected indicators in the School Performance Grade data report. A result of these findings was shared with internal and external stakeholders upon the completion of the study as reported by the North Carolina Department of Public Instruction.

The data that was collected was based on public information documents, including the number of students who earned Honor Roll status and a comparison between ACT scores

between two consecutive school years from the ACT website. This information was collected through local news sources since students who earn Honor Roll is published in local newspapers.

Limitations

There are some specific limitations to this study. One limitation involved the SAT Prep course. Although all students were required to complete online assignments for the course, some students benefited more from being in the face-to-face course as opposed to some other students who never physically attended the class. Students in the face-to-face course could receive immediate answers to their questions from the instructors, whereas students would have to wait to receive written feedback if they did not physically attend the classes due to scheduling conflicts or if they had a college class during the same time as the SAT prep course. Additionally, some instructors consistently input grades into their online gradebooks whereas other instructors were late entering their grades which resulted in students not being able to stay abreast of their actual averages in the course.

Another limitation involved the fidelity in which the students received helpful feedback during Advisory. While all staff members participated in training prior to meeting with students for advisory, each staff member brought their own level of expertise to the advising sessions. For example, some staff members were not formally trained through extensive coursework in the various subject areas in which they were providing advice to students. Not having the formal training could have resulted in some students receiving advice that may have been well intended, but not practical for specific subject areas. Therefore, if advisor knowledge was limited in a certain content area, it would have been somewhat difficult for the advisor to provide students with specific and meaningful advice to help them be more successful in those particular content courses since the advisee/advisor pairings were done randomly.

The same results applied to the effectiveness of Study Hall. Because some Study Hall teachers did not see the point or agree with the design of Study Hall, some had to receive more coaching than other instructors in order to help them maintain a structured learning environment. At least one instructor was removed from serving as an instructor as a result. The instructors who insisted that students utilize the Study Hall time effectively yielded higher academic results than instructors who haphazardly monitored student performance.

There were some limitations with the ACT Prep Course as well. Because there was no online platform and since the resources typically resulted in copies reproduced from a single ACT prep textbook, it was difficult for students to receive instant feedback on their performance. Having more timely feedback would have allowed more time for students to study. Also, having limited time to have the actual ACT work sessions was another limitation since literature supports that effective implementation requires constant and routine prep course sessions.

Definition of Terms

EVAAS- examines the impact of teachers, schools, and districts on the learning of their students in specific courses, grades, and subjects. Users can access colorful, easy-to-understand charts and graphs via the Web, as well as produce customized reports that predict student success, show the effects of schooling at particular schools, or reveal patterns in subgroup performance (EVAAS, 2016).

Internal, Summative Program Evaluation-evaluation method utilized by internal stakeholders to determine program effectiveness over an extended period of time.

Revised Bloom's Taxonomy- a model that provides a way to organize thinking skills into six levels, from the most basic to the more complex levels of thinking (Armstrong, 2016).

Schoolnet-a web-based solution that combines assessment, reporting, and instructional management in a single, user-friendly platform (What is Schoolnet, 2015).

CHAPTER 2: RESEARCH-BASED INTERVENTION PROGRAMS

This study explored the potential impact of four school- based intervention programs on student academic performance. An examination of the related literature revealed information regarding research based school intervention programs. Based on the information obtained from various searches, the review of literature is presented in major topics within the broad framework of Early College history, benchmark assessments, and research-based intervention programs. A literature map was utilized to outline the sources of information in this study (see Table 2). Because Early Colleges have only been in full existence since 2008, comparatively, there is limited literature regarding Early Colleges; however, studies support that Early Colleges in their design prepare students to be more college prepared than students who don't attend college because of the design model and interventions that are incorporated into Early College curriculum.

For the purpose of this study, the literature map also highlights various studies regarding the intervention strategies implemented in the study. Various forms of literature support the use of study hall programs, ACT/SAT Preparation courses, advisory periods, and college success courses. If implemented with fidelity, these programs have proven to be effective at raising student achievement at various institutions at both the primary and secondary levels.

These interventions were selected based on the literature that supported their effectiveness. For the purpose of this study, quantitative measures were implemented to determine the overall effectiveness of the four school-based interventions implemented in the study.

Table 2

Literature Map

Professional Expectations	History	Educational Policies
Report to the North Carolina General Assembly [NCNSP] (2012)	2014 READY Accountability Background Brief Supplement: North Carolina School Performance Grades (2015)	Article 16. Optional Programs (2016)
Understanding By Design (2016)	Berger et al. (2013)	Homework Study Hall: Mandatory "Make Up" for Missed Work (2016)
Fitzpatrick, Sanders, & Worthen (2011)	ACT Profile Report (2015)	Jacobs & Hyman (2016)
Reinventing High Schools for Postsecondary Success (2016)	ACT Profile Report (2016)	Quick Facts: A-F School Performance Grades (2016)
Sandweiss (2016) Test Prep	Report to the North Carolina General Assembly (2012)	Leal (2015)
What is Academic Advising? (2016)	United States Census Bureau (2016)	
McTighe & Wiggins (2011)		

Note. The table illustrates the logical method which will be utilized in order to conduct the study.

Early College History

According to Project Director Andrea Berger and her team of researchers (2013) at the American Institutes for Research and Stanford Research Institute, their team conducts the most comprehensive study on the Early College High School Initiative. The study findings report states that in 2002, the Bill and Melinda Gates Foundation launch the Early College High School Initiative with the primary goal of increasing the opportunity for underserved students to earn a postsecondary credential. To achieve this goal, Early Colleges provide underserved students with exposure to, and support in, college while they are in high school. Early Colleges partner with colleges and universities to offer all students an opportunity to earn an associate's degree or up to two years of college credits toward a bachelor's degree during high school at no or low cost to the students. The underlying assumption was that engaging underrepresented students in a rigorous high school curriculum tied to the incentive of earning college credit will motivate them and increase their access to additional postsecondary education and credentials after high school. Since 2002, more than 240 Early Colleges have opened nationwide (Berger et al., 2013).

In the North Carolina News Schools Project Report to the North Carolina General Assembly (2012), North Carolina New Schools reporters state, The early colleges are reducing or eliminating the performance gap between minorities and white students in core outcomes. For example, in the early colleges by the end of 10th grade, minority students had successfully completed biology at a rate that was 7 percentage points higher than their non-minority peers. In the control group, minority students successfully completed biology at a rate that was 12 percentage points lower than their non-minority peers (Report to the North Carolina General Assembly, 2012).

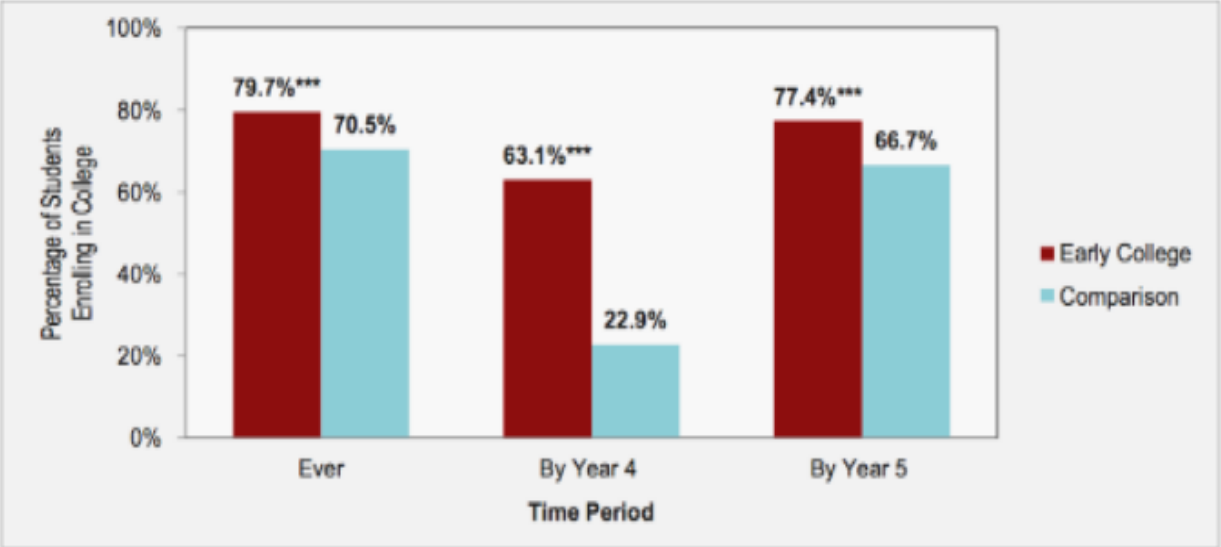
Pathways in Technology Early College High School began as a collaboration between New York City's education department, the City University of New York and IBM. P-TECH is a six-year school that allows students to earn a high school degree and either an associate degree or two years of college credit. The highest performing students are offered a job upon graduation at IBM (Munguia, 2015).

The most recent comprehensive *study* was conducted in 2013 by the American Institutes for Research, which found that students from early college high schools were significantly more likely to attend college after their high school graduation. Figure 1 shows that students who attend Early College have a higher rate of attending college than students who attend traditional schools.

As of 2016, New York was slated to open 100 or more similar schools in New York, Chicago, and Connecticut whereas there were only 37 just a year prior. Additionally, these schools partner with businesses to help ensure graduates have jobs in line when they graduate from early college (Munguia, 2015).

In a North Carolina study entitled, *The Impact of the Early College High School Model on Core 9th and 10th Grade Student Outcomes*, the authors show that the Early College High School model is having a positive impact regarding students remaining in school and becoming ready for college. The outcomes also show substantial progress towards its goal of graduating more students who are ready for college and work (Edmunds, Bernstein, Unlu, Glennie, & Arshavsky, 2011). As the studies show, early colleges are achieving its goal of graduating more students who are college and career ready, and who are attending college.

Exhibit 3.4. Percentage of Students Who Ever Enrolled in College and Who Enrolled by Year 4 and by Year 5 After Starting Ninth Grade, by Study Group



Note. Adapted from article entitled *Early College High Schools are Off to a Promising Start* by Hayley Munguia (2015).

Figure 1. Students enrolled in Early College after ninth grade.

Newsweek Magazine recognized the school in this study in 2015 and 2016 for "Beating the Odds" and graduating students who are college and career ready after implementing the four interventions listed in the study. The school also received recognition by the 2015 and 2016 U.S. News and World Report as being one of the top high schools in the state of North Carolina and the United States and earned a Bronze Medal for this accomplishment both years.

According to Understanding by Design (2016), an excellent book by Grant Wiggins and Jay McTighe, offers a powerful framework for designing courses through what they call "Backward Design." It seems "backward" in that it starts from the opposite end of the planning process we typically go through to design courses usually start by thinking about how to teach our content. Backward Design, in contrast, leaves teaching activities until the end and starts with the desired results of that teaching. In other words, Wiggins and McTighe argue that you can't start planning *how* you're going to teach until you know exactly *what* you want your students to learn. "Teaching is a means to an end. Having a clear goal helps us educators to focus our planning and guide purposeful action toward the intended results" (Understanding by Design, 2016). Therefore, if the goal is to have students be successful academically, courses must be designed through the use of scaffolding processes to ensure students meet their goals.

SAT/ACT Preparation Course

According to Steve Sandweiss (2016) of Sandweiss Test Prep, Winter and spring of junior year is the best time to prepare for the SAT or ACT—and if you have a student planning on taking one of those tests, it's time to start getting prepared! Taking test prep classes is a great option for all different kinds of learners: visual, auditory, and kinesthetic (Sandweiss, 2016).

According to nonprofit institute in Raleigh, NC president of the John W. Pope Center for Higher Education Policy, Jane Shaw (2011) in her article entitled Who Benefits Most From SAT

Prep states, Test-preparation companies can raise students' SAT scores by improving their test-taking skills and filling in some educational gaps. But students can accomplish the same thing using aids available from the College Board and others at little or no cost — taking practice tests, building vocabulary and reviewing basic algebra and geometry. Mostly, test-prep companies provide the discipline to help students do what they could do on their own (Shaw, 2011).

According to Education Writer Janelle Cox (2009-2018) in A Quick Look at the Frayer Model Strategy, the Frayer Model has several benefits and advantages. She states in her article entitled A Quick Look at the Frayer Model Strategy that the model:

- Helps make connections between what students know and what they will learn.
- Can be used before, during, or after reading.
- It improves retention of information.
- Students learn how one concept relates to another concept.

Benefits

- Promotes critical thinking.
- Can be used individually, in small groups, or whole group.
- Draws on students' prior knowledge.
- Creates a visual reference to compare examples.

(Cox, 2009-2018)

According to Frank McWilliams (2013) in 3 Compelling Reasons Every School Should Offer ACT & SAT Prep, ACT and SAT test prep programs take the guesswork out of test-taking for your students, while providing score-raising preparation to students who might not otherwise prepare. They also help teachers prepare students for standardized testing. Since so many things ride on school-wide test scores—including but not limited to funding for your school—it makes

sense to prepare your students so that your school is more likely to have students with higher test scores (McWilliams, 2013).

College Success 101 Course

According to Dr. Lynn F. Jacobs and Jeremy S. Hyman (2016), coauthors of *The Secrets of College Success*: *Over 800 Tips, Techniques, and Strategies Revealed* (2nd ed.), students should have a goal, set priorities, engage the professor, and be open to feedback. Many of the tips in *The Secrets of College Success* are embedded in the third school based intervention program that is implemented at the school in the study.

Furthermore, Laura Hope, supports College Success courses in her study at the Carnegie Foundation for the Advancement of Teaching. Hope (2010) states in the Literature Review of Student Success, Overall, students indicate that student success courses satisfy their academic and personal goals. As part of the Survey of Entering Student Engagement supported by Community College Survey of Student Engagement (CSSE), students reported the following:

- 63% said they enhanced their learning skills
- 69% said they improved their time management habits
- 75% reported that they better understood their academic strengths and weaknesses
- 80% said that they learned about important college services
- 81% reported that they learned about critical college processes and deadlines.

These results indicate that students perceive that student success courses generally achieve what they are designed to do: promote awareness and support successful student behaviors (Hope, 2010). The data supports the use of a college success course as outlined in the study.

There were twenty-four students enrolled in College Success in the Fall 2015 semester, thirteen students enrolled in the Spring 2016 semester, nine enrolled in the Fall 2016 semester, and 10 enrolled in the Spring 2017 semester. There was a fourteen student decrease in the number of students having to complete the College Success course between Fall 2015 and Spring 2017.

Lauren O' Gara, Melinda Mechur Karp, and Katherine L. Hughes (2008) conducted a study on the effectiveness of student success courses entitled Student Success Courses in the Community College: An Exploratory Study of Student Perspectives. Their study examined a student success course in two urban community colleges in the Northeast. Through analysis of student interview data, the authors find that the student success course helps students learn about the college, receive course advice, and develop stronger study skills. The course also acts as a catalyst for building important relationships with professors and peers that help students integrate into the social and academic fabric of the college.

Additionally, individual benefits that accrue from the course reinforce one another to create even greater outcomes that have long-lasting impacts. The authors conclude that the student success course may serve as a useful strategy in helping community college students persist and earn degrees (O'Gara et al., 2008).

Advisory Period

According to What is Academic Advising? (2016), An adviser may provide assistance in helping a student learn how to make practical academic plans and decisions, how to discover a range of options available to the student, based on the student's stated goals, and how to think through the consequences of the student's own choices (What is Academic Advising?, 2016).

In an article entitled *The Role of Advisory in Personalizing the Secondary Experience* (2017) by Tom Van Vander Ark, Adam Kulaas, and Mary Ryerse of the Science Leadership Academy, student-teacher relationships radiate from the advisory period. Advisory should be thought of as the soul of the school. Educators should remember they teach students before they teach subjects. Advisory is the place in the schedule where that idea has its core and then it spreads into everything else done at the school. An advisory is a key component of a distributed student guidance strategy that includes regular meetings between an advisor and a group of students, that meets at regular intervals, has a clear focus, and is something in which all students and staff participate in (Vander Ark et al., 2017).

According to Shulkind and Foote (2018), while advisory programs have been promoted in the literature, and middle grades practitioners have intuitively recognize their value, up to this point there has been limited empirical evidence to support advisory programs. Advisories with high levels of connectedness actively worked on creating a healthy community by addressing the way students related to one another. Advisors consciously helped students in their advisories work out issues among themselves, and they talked openly about the importance of treating each other with respect (Shulkind & Foote, 2018).

Benchmark Assessments

Benchmark assessments are critical to help teachers identify weaknesses in order to provide interventions for students. Some local school districts use TE21, Schoolnet, or any host of benchmark assessments. In this study, the local school district utilizes the TE 21 Benchmark assessments based on standards that teachers have covered in their courses. The benchmarks are designed for each core subject area. Elective course benchmarks are teacher developed. Students are given one full class period of ninety minutes to complete each benchmark and results are

shared with principals within one week after benchmarks have been completed at the school level. Principals in turn share results with teachers. Teachers then utilize benchmark results to remediate or accelerate students within their individual content areas.

According to Lynn Olson (2005) in her article entitled *Benchmark assessments offer regular checkups on student achievement*, the reason that there is a boom in benchmark assessments is that most states and school systems are providing nothing more than autopsy reports right now. They tell you why the patient died at the end of the year, and then marveled that the patient didn't get any better."

Studies by the Washington-based Council of the Great City Schools, the Austin, Texas-based National Center for Educational Accountability, and others have found that one feature of high-achieving districts is their use of periodic, benchmark assessments to track student achievement and make adjustments.

> "Good formative assessments, good benchmark assessments, provide feedback throughout the year, and that is far more fair to principals and teachers, provided they are used wisely. New competitors have flooded the formative-assessment market, including:
>
> • Major test publishers, such as the New York City-based CTB/McGraw-Hill and the San Antonio-based Harcourt Assessment;
>
> • Test-preparation companies, including the New York City-based Princeton Review;
>
> • For-profit providers that specialize in linking assessment results with prescribed remediation plans and curricula, such as the San Diego-based Compass Learning and the New York City-based Kaplan K-12 Learning Services;
>
> • Nonprofit organizations, such as the Portland, Ore.-based Northwest Evaluation Association; and

• Suppliers of "whole-school-reform models," such as the New York City-based Edison Schools Inc. and Mr. Slavin's Baltimore-based Success for All Foundation, which designed the 4Sight assessment series.

The products of such suppliers range from formatted tests linked to the standards in individual states, to item banks that districts and schools can use to develop their own assessments, to online testing, scoring, and reporting systems" (Olsen, 2005).

College Admission Exams (ACT/SAT)

According to the ACT History (2016) webpage, in 1959, University of Iowa education professor E.F. Lindquist launched the forerunner to the ACT® assessment, now known as the ACT college readiness assessment. Lindquist broke new ground, focusing not on cognitive reasoning, but instead on the information taught in schools. Lindquist's trailblazing assessment sparked a long history of ACT innovation. ACT was the first to define college and career readiness standards. ACT is the first and only college entrance exam to include a science assessment. And in 2014, ACT Aspire™ debuted as the first digital assessment system, providing a unified record of student performance from the elementary grades through early high school. Though ACT initially focused on college readiness, ACT now offers more than twenty programs and services, providing support for all of life's transitions along the Kindergarten through Career continuum (ACT History, 2016).

According to The College Board (2016), The College Board is a mission-driven not-for-profit organization that connects students to college success and opportunity. Founded in 1900, the College Board was created to expand access to higher education. Today, the membership association is made up of over 6,000 of the world's leading educational institutions and is dedicated to promoting excellence and equity in education. Each year, the College Board helps

more than seven million students prepare for a successful transition to college through programs and services in college readiness and college success — including the SAT and the Advanced Placement Program. The organization also serves the education community through research and advocacy on behalf of students, educators and schools (The College Board, 2016).

CHAPTER 3: METHODOLOGY

As noted in Chapter 1, the purpose of this study was to determine the effectiveness of the four school-based programs over the course of two school years (2014-2015 and 2015-2016) to determine the impact of these programs on standardized, state, and local assessments. The intervention programs that were implemented are: mandatory Study Hall for all students, an ACT/SAT Prep course, a College Success course, and an Advisory Period.

A summative program evaluation will be utilized in this study; therefore, there are no participants in this study since only publicly, published data will be reviewed in this study. The Early College High School has a population of 118 students in 2014-2015 and increased its population to 142 students in 2015-2016. The school serves grades nine through thirteen, allowing an additional year for students to complete an associate's degree as well as a high school diploma. All students receive a free laptop and the cost of course tuition, textbooks, and access codes are free to students. Students are also able to earn Work Readiness certifications through the national ACT Workkeys Assessment. The school has a total of eight full-time teaching staff members, five office staff members including one of the following: guidance counselor, college liaison, instructional technology facilitator, secretary, and principal. The school has one custodian, three bus drivers, one shared nurse and social worker, and two alternating school resource officers. The school hosts a series of programs throughout the school year, including: Honor Roll celebrations, Freshmen Orientation, Senior Awards Night, college road trips, Graduation, Friday advising sessions, parent nights, club days, fit Friday, and Community Partner Day.

In 2014-2015 and 2015-2016, the school exceeded Educational Value-Added Assessment System (EVAAS) growth status. The school's four year cohort graduation rates are noted in

Table 3. Hertford County Early College High School had a 5% decrease in its four year cohort graduation rate between 2013-2014, an increase of 3.5% between 2014-2015, and another increase between 2015-2016. Cohort graduation rates for 2016-2017 have not been released during the time of this study. Although the study spans over the course of academic years 2014-2015 and 2015-2016, four year cohort graduation rates from 2012-2013 and 2013-2014 were included to establish a baseline for previous graduation cohort rates to determine if the intervention programs impacted cohort graduation rates in the study, although, cohort graduation rates were not included in the program evaluation to determine program effectiveness.

Study Design

Based on the study questions and data collected, an internal summative program evaluation case study was determined to be the best study design method for the purpose of this study. The principal investigator will review the school's performance data, including teacher assigned grades in high school and college courses, benchmark assessments, and ACT scores to measure the effectiveness of the four school based intervention programs that are implemented to help raise student achievement on state and national assessments, as well as in high school and college courses. According to Fitzpatrick, Sanders, and Worthen (2011) internal stakeholders are already employed by the local education agency, are familiar with the organization, have more knowledge of the program model, and are more familiar with stakeholder groups than external stakeholders (Fitzpatrick et al., 2011, p. 274). The internal program evaluation case study will help stakeholders determine if the school based intervention programs raise student achievement or if alternative programs are needed.

Table 3

Four Year Cohort Graduation Rates between 2012-2016

Year	Cohort Graduation Rate (%)
2012-2013	95%
2013-2014	90%
2014-2015	93.5%
2015-2016	94.7%

Note. The table illustrates four-year cohort graduation rate data for the school in the study between 2012-2016 at Hertford County Early College High School. Data retrieved from Cohort Graduation Rates (2016).

Data Collection

Data for this study was obtained from quantitative sources. The quantitative data consists of student class grades, standardized test scores on benchmark and end-of-course assessments, EVAAS growth score, cohort Graduation rates, ACT scores, ACT Workkeys scores, SAT scores, and the school's overall school performance grade. In this study, a comparison was made with different cohorts by examining the total number of students tested versus the number of students proficient. Students' historical EVAAS data was also utilized during the analysis of this study as EVAAS provides predictors of a student's scores based on previous testing history in individual subjects. Class cohort assessment scores are also compared to determine if there is an increase, decrease or no change based on class proficiency percentages.

The programs were monitored by the principal investigator using a summative program evaluation to determine the effectiveness of the programs. Adjustments were made as necessary based on results to ensure optimum student success.

Quantitative Data

The quantitative data in this study consists of student class grades, standardized test scores on benchmark and end-of-course assessments, EVAAS growth scores, cohort Graduation rates, ACT scores, ACT Workkeys scores, SAT scores, and the school's overall school performance grade. Student class grades are used to determine if class assignments have the same level of rigor as the assessments that are utilized to determine the school's performance grade. As teachers assess students using Schoolnet assessments, monthly data conferences are held between teachers and the principal to determine if students need to be remediated or accelerated based on their test score results. The types of test questions are also analyzed for high

levels of rigor according to Revised Bloom's Taxonomy (Armstrong, 2016) and tutoring groups are formed based on the student assessment scores.

Standardized test scores on benchmarks and end-of-course assessments are also utilized using Schoolnet and North Carolina state tests to determine effectiveness of the intervention programs at the school. The school's principal meets with individual teachers after students complete the North Carolina End-of-Course testing and benchmark assessments using the TE21 Program. Additionally, the EVAAS system is utilized by teachers to determine if student test scores have improved from the previous years on all North Carolina state assessments. After assessments are completed, EVAAS predictors are re-evaluated to determine the level of student growth.

Lastly, cohort Graduation rates, ACT scores, ACT Workkeys scores, and SAT scores are evaluated to determine the level of effectiveness of the ACT prep course, Workkeys prep course, and SAT Prep course. The goal is to determine if the results in these areas remained constant, decreased, or improved based on the ACT, Work keys, and SAT prep courses since all of these areas are indicators in determining the school's performance grade. Student class grades, standardized test scores on benchmark and end-of-course assessments, EVAAS growth scores, cohort Graduation rates, ACT scores, ACT Workkeys scores, and SAT scores are used to determine the effectiveness of the interventions that are implemented at the school since each of these areas serve as an indicator in determining the school's overall performance grade.

Data Analysis

Without utilizing a program evaluation model, data collection would be limited and the study would be incomplete due to the North Carolina General Assembly's decision to renorm high school math standards in the summer of 2016 which would go into effect during the 2016-

2017 school year. With the renorming of the high school math standards, it is unknown as to how the Math 3 Course Rigor School Performance Grade indicator will be factored in a high school's 2015-2016 School Performance Grade since the North Carolina Department of Public Instruction chose to pilot the new assessment in the 2015-2016 school year and is not reporting any data from the assessment. Without data from the assessment and due to the subjectivity of individual math teacher grades, it will be impossible to truly compare the assessment results from 2014-2015 with results from 2015-2016 in the Math 3 course. Therefore, a program evaluation is most feasible in this study. Because the internal, summative program evaluation focuses heavily on the results of the various local and national assessments, cases of bias are limited since all comments are provided based on the assessment results. To avoid any ethical pitfalls as it relates to testing, individual student data is only shared with internal stakeholders (i.e. school staff, the individual student and his/her parent), and staff members adhere to the North Carolina Testing Code of Ethics to ensure student's individual information is secure. A result of these findings is shared with internal and external stakeholders upon the completion of the study as reported by the North Carolina Department of Public Instruction. The driving question during this study is: If implemented with fidelity, can a series of school based intervention programs help impact this Early College High School's school performance grade as determined by the North Carolina Department of Public Instruction? A description of each of the four school-based programs is listed below.

Initially, all four school-based intervention programs are studied to determine if programs of this nature would be beneficial to students based on data at other schools and previous academic experiences from the principal investigator. The school based intervention programs that are implemented include: mandatory Study Hall for all students in Grades 9-13, an

ACT/SAT Prep course for students in Grade 11, a College Success course for all students in Grades 9-13 who earn a D or F in a college course which focuses on college prep skills for students, and an Advisory Period for all students in grades 9-13. Ultimately, these intervention programs were selected based on the needs of the students. Students who do not have time to do work outside of school due to other commitments (i.e. jobs, extracurricular activities, family commitments, etc.) will now have time built into the school day to complete assignments, while ensuring instructional hour requirements are being met. After reviewing the decrease in the school's ACT composite, it was evident that students need assistance in being more successful on the assessment which is why an ACT Prep course is provided to eleventh grade students since they first take the assessment during the latter part of the eleventh grade year. Due to the challenges students face in being successful in college courses results in the development of the College Success course. Lastly, Advisory is added to help students map out plans for being successful in their courses throughout the school year and to ensure they are on track to graduating on time.

Statement of the Problem

Are there interventions that can be implemented to increase student achievement? Furthermore, if implemented with fidelity, can school based interventions increase a school's overall performance grade as set by the North Carolina Department of Public Instruction? The purpose of this study was to determine if these school based interventions would have an impact on student achievement.

Study Questions

Four study questions were considered in this study. They were:

1. Does the Advisory Period impact student academic performance based on teacher assigned grades? Include honor roll numbers in a chart/table under advisory period section to measure this.
2. Does the ACT Prep course impact student academic performance as measured by the ACT assessment? Be sure to state somewhere that we are measuring different cohorts of students in the ACT Prep section.
3. Does the Study Hall Period impact student academic performance based on teacher assigned grades?
4. Does the College Success 101 course impact student academic performance as measured by the college course assigned teacher grades?

Implementation

The local education agency school staff facilitates the school-based interventions during the study. The interventions are implemented starting with the 2014-2015 school year and concluded with the 2015-2016 school year. Interventions are designed using the Understanding by Design Process developed by Jay Mctighe and Grant Wiggins which states that one should begin with the end in mind and all strategies should lead toward completion of the end goal (Understanding By Design Framework, 2011). Each intervention was designed to address one or more indicators used to calculate the high school's School Performance Grade. Several of the interventions are mandated for certain students, while some are optional to allow teacher and student differentiation and flexibility to best meet the needs of students with the ultimate goal of increasing student achievement as measured by the school's performance grade.

The interventions are implemented throughout the course of the school day through the use of flexible student and staff scheduling. A thirty minute remediation period is built into the

school day for students to receive tutoring and/or attend Study Hall to complete assignments as needed, in addition to preparing for the ACT and SAT assessments. To begin the process, interventions are designed by various staff members. Some staff volunteered, but most were appointed by the school's principal to lead the various interventions. The first intervention is a Study Hall Period for all students. Study Hall is held between 11:00am-11:30am on Mondays-Thursdays of each week. Students are required to bring assignments to work on during the Study Hall Period that was housed in various classrooms around the campus. The school's administrative team members, consisting of the principal, instructional technology facilitator, guidance counselor, and college liaison are each assigned a grade level and are responsible for having students validate their attendance by using a sign-in log daily where students recorded their name and the activities they are working on for the day (see Appendix B for a blank copy of the sign-in sheet). The staff member then monitors the students for the duration of the thirty-minute time period to ensure students are completing their assignments and answers any questions as needed. During the Study Hall period, teachers could withhold any students who needed additional tutoring, but are required to notify members of the administrative team if they are keeping the student(s) for recordkeeping purposes. Teachers are allowed to withhold students who they feel need additional assistance to allow for small-group instruction and remediation, as needed. If multiple teachers need to see the same students, the teachers develop a schedule to determine which teacher the student needs to report to on select days. Teachers are also responsible for logging students who report to them for tutoring.

Each member of the administrative team: principal, guidance counselors, college liaison, and instructional technology facilitator is assigned a grade level and room location for Study Hall. The room assignments are listed as follows:

Study Hall Grade Level Assignments

- Instructional Technology Facilitator-9th Grade students
- College Liaison-10th Grade students
- Principal-11th Grade students
- Guidance Counselor-12th Grade students

As a summary to help guide this study, a logic model was used to explain the various resources, activities, outputs, outcomes, and impact on student academic performance and the various resources that will be needed to complete this study (see Table 4).

This Study Research-Based School Intervention Programs

According to Homework Study Hall: Mandatory "Make Up" for Missed Work (2016), Principal David Chambers of Cantwell Sacred Heart of Mary High School in Montebello, California started a mandatory homework Study Hall for students who had excessive zeros on homework assignments and the school saw an increase in the number of students making honor roll from 32% to 50%. The policy has produced more honor students, raised the average GPA, and improved teacher morale according to Principal Chambers (Homework Study Hall: Mandatory “Make Up” for Missed Work, 2016).

According to Steve Sandweiss (2016) of Sandweiss Test Prep, Winter and spring of junior year is the best time to prepare for the SAT or ACT—and if you have a student planning on taking one of those tests, it's time to start getting prepared! Taking test prep classes is a great option for all different kinds of learners: visual, auditory, and kinesthetic (Sandweiss, 2016).

According to Jacobs and Hyman (2016), coauthors of *The Secrets of College Success: Over 800 Tips, Techniques, and Strategies Revealed* (2nd ed.), students should have a goal, set priorities, engage the professor, and be open to feedback (Jacobs & Hyman, 2016).

Table 4

Logic Model

Resources/Inputs	Activities	Outputs	Outcomes	Impact
Streamline focus for study in consultation with committee chairperson	Create list of interview questions	Completed list of answered interview questions from participants	Streamlined approach developed to help raise student achievement	School Performance Grades will increase
Articles related to school accountability models, SPG, and Early Colleges	Create schedule of when interviews will take place	Completed Literature Map	Increase in School Performance Grade indicators	Ability to efficiently view school data and use such data to drive school decision making related to student achievement
Literature Map Culmination of study findings	Read articles related to school accountability models	Completed list of articles		Positive perception of school by stakeholders
Provide training to staff members who will be implementing the interventions and monitoring plan	Create Literature Map			
	Compile study findings			

Note. The table illustrates the logical method which will be utilized in order to conduct the study.

Many of the tips in *The Secrets of College Success* are embedded in the third school based intervention program that is implemented at the school in the study.

According to the Office of Academic Services at Rutgers University, an adviser may provide assistance in helping a student learn how to make practical academic plans and decisions, how to discover a range of options available to the student, based on the student's stated goals, and how to think through the consequences of the student's own choices (What is Academic Advising?, 2016).

Studies support that school-based intervention programs can have ambiguous results depending on the level of fidelity in which they are implemented. Author Hilde Pape states one school based substance use prevention programme in Norway – Youth & Alcohol – could be recommended because its effectiveness had been demonstrated. However, Pape further states, no one type of prevention programme can be recommended. Furthermore, aims to reduce pupils' substance use should be abandoned, and that factual teaching about the theme should be strengthened instead (Pape, 2009). When examining the effects of alcohol use prevention programs, authors Stigler, Neusel, and Perry (2011) state, not all interventions that have been developed and implemented have been found to be effective. In-depth analyses have indicated that to be most effective, interventions should be theory driven, address social norms around alcohol use, build personal and social skills helping students resist pressure to use alcohol, involve interactive teaching approaches, use peer leaders, integrate other segments of the population into the program, be delivered over several sessions and years, provide training and support to facilitators, and be culturally and developmentally appropriate (Stigler et al., 2011).

Authors Farrington and Ttofi studied the effects of school-based anti-bullying programs. Farrington and Ttofi (2010) state, our meta-analysis of these 44 evaluations showed that, overall,

school-based anti-bullying programs are effective in reducing bullying and victimization (being bullied). On average, bullying decreased by 20% – 23% and victimization decreased by 17% – 20%. The effects were generally highest in the age-cohort designs and lowest in the randomized experiments. It was not clear, however, that the randomized experiments were methodologically superior in all cases, because sometimes a very small number of schools (between three and seven) were randomly assigned to conditions, and because of other methodological problems such as differential attrition. Various program elements and intervention components were associated with a decrease in both bullying and victimization (Farrington & Ttofi, 2009).

Study Hall

In this study, Study Hall was designed by members of the Early College's administrative team, including the school's principal, instructional technology facilitator, guidance counselor, and college liaison. Prior to implementing the program, the administrative team utilized the Understanding By Design process also known as Backwards Design to set goals for the program as noted previously by McTighe and Wiggins (2011) in The Understanding by Design guide to creating high-quality units (McTighe & Wiggins, 2011). At the beginning of each school year, the administrative team members receive a notebook from the principal which includes a student roster, college course schedule, sign-in sheets, and a handout with Study Hall monitoring expectations as listed as follows:

Study Hall Teacher Instructions

1. Have students come in and sit down quietly and begin working.
2. Teacher should walk sign in sheet around to each student to greet them and have them sign in as students begin working quietly.

3. After students have signed in, teacher should report to Resource Officer any students who are missing so they can be located, if they are at school.
4. Teacher should collect any notes from students who need to go and see a teacher and write them a hall pass to report to the teacher. If the student doesn't have a note, the Study Hall teacher is not to release the student to go to another class. Students who have college classes should go to their college classes.
5. Teacher is to walk around regularly to monitor student's progress and answer any questions they may have.
6. Teacher can station themselves at the back of the classroom so they can monitor student's progress. Teacher should not sit at the front because the teacher will not be able to see what students are doing especially if they are on their computers.
7. If cell phones are out, teacher is to ask student to put it away and if student is seen with it again, teacher is to confiscate it and turn it to principal with the student's name on it. *No food and/or drinks are allowed.*
8. Release students at 11:30am and note time on sign in sheet that students left. Remind students that they must be back in class by 12:00 and will be written up for skipping if they are late.
9. Students should be working quietly and not doing group work during Study Hall so they are not distracting other students.
10. Report any issues to principal.

Internal stakeholders monitored the number of students who earned Honor Roll or Principal's List status each grading period. Honor Roll students earned all As and Bs in a grading period. Principal's List students earned all As in a grading period. Additionally, internal

stakeholders monitored student classroom grades given by teachers, the frequency of parent-teacher conferences due to lack of student academic performance, and the number of students attending tutoring on a weekly basis to determine the effectiveness of the Study Hall Program. The ultimate goal for the program was to ensure students had time to complete some assignments at school since many students babysit, play sports, or work part time jobs after school which prevents them from being able to complete their assignments on time. Having a time for students to complete assignments during the school day was thought to help reduce student procrastination tendencies and decrease student stress levels. The administrative team members each agreed to serve as monitors during the Study Hall period. Each team member monitored a chosen grade level. The instructional technology facilitator monitored the ninth grade students. The college liaison monitored the tenth grade students. The principal investigator monitored the eleventh grade students. The guidance counselor monitored the twelfth and thirteenth grade students.

According to Homework Study Hall: Mandatory "Make Up" for Missed Work (2016), Principal David Chambers of Cantwell Sacred Heart of Mary High School in Montebello, California started a mandatory homework Study Hall for students who had excessive zeros on homework assignments and the school saw an increase in the number of students making honor roll from 32% to 50%. The policy has produced more honor students, raised the average GPA, and improved teacher morale according to Principal Chambers (According to Homework Study Hall: Mandatory "Make Up" for Missed Work (2016).

In a study entitled *The Effects of Mandatory Study Hall on the Academic Performance of Student- Athletes* by Anthony Van Gessel (2012) at the University of Notre Dame, he concluded the following:

- 71% of students strongly agreed or agreed that study hall helped their performance in school.
- 69% of students strongly agreed or agreed that study hall helped them complete homework assignments
- 80% of coaches strongly agreed or agreed that study hall helped student performance in school.
- 90% of coaches strongly agreed or agreed that the study hall helped students complete homework assignments.
- 80% of coaches strongly agreed or agreed that study hall was a good use of time.

(Gessel, 2012).

According to Adam Tharp (2016), in an article entitled *The Advantages of Study Hall*, he states, Jefferson-Morgan High School has lacked a study hall for many years, but study halls were beneficial and should be reinstated as soon as possible. Students could benefit greatly from extra time to do anything that needs done. With a study hall, students would have much more time to catch up on schoolwork, do homework, and study. This could prove drastic increase in grades for more than a few students. About 90% of students polled in Jefferson-Morgan High School would find a study hall beneficial, for either their grades or their own personal learning experience. Eighty-five percent of surveyed students said they would use study hall to study, do homework, or catch up on class work. Many students who play sports would find the extra time invaluable, and would not have to push themselves as hard to keep up with their sports, homework, social life, and home life. A study hall would prove to be a major stress reliever for students, such as Carrington Teasdale, who are juggling many priorities, and they lose sleep in the process. Sleep is one of the most important things in a teenager's life in

order to maintain their health, and yes, a study hall would knock off some time students use in the evening to study which means more sleep for them (Tharp, 2016).

Although the major focus is on helping students be successful on the ACT, all students in Grades 9-13 are also enrolled in a SAT preparation course known as Academic Support where students are assigned two SAT vocabulary words per week. Each student is required to define the two assigned words, use them in a sentence, and locate a picture on the internet that represents their word. This is known as the Frayer Model. Students are required to submit their assignment in Schoology after which it is graded by the Academic Support teacher assistant and students receive a numerical grade for the assignment which factors into their grade point average. Initially, the instructional technology facilitator and principal are responsible for inputting the weekly graded assignments into PowerSchool for students no more than five days after the assignment is due. In 2015-2016, the district permitted certified teachers to be paid to forfeit their planning by serving as Academic Support teachers. Part of their responsibility is to insert grades for their assigned students. Students earn one credit for the course if they successfully pass the class.

The target population of students taking the ACT prep course is students in Grade eleven since all Grade eleven students are required to take the ACT in March of their 11th grade year. All Grade eleven students are enrolled in the course by the school's data manager using the PowerSchool management database. The guidance counselor is responsible for preparing lessons, teaching the Grade eleven students the materials needed to be successful on the ACT, and for grading the assignments and entering student grades into Powerschool for the course. The counselor utilizes materials in ACT preparation books that are purchased through the school's textbook allotment to create assignments since they are designed by the creators of the

ACT assessment. All Grade eleven students report to the class on Fridays from 11:00am-11:30am while the remaining student body attends a Friday Advising Session with remaining staff members.

The principal investigator monitored the school's overall ACT composite after results were provided to schools in August following the March ACT assessment administration for the 2014-2015 and 2015-2016 school years. An ACT Profile Report was sent to each school annually in August. The ACT Profile Report provides school-based information regarding student performance on the ACT, including the average ACT score. Additionally, the North Carolina Department of Public Instruction reported the school's overall ACT percentage score in the School Performance Grade data report that is released to the public in October. In looking at the data in Table 5 for the 2014-2015 and 2015-2016 school years, there is an increase from 17.3 to 18.9 as composite scores for the school in this study. Although the data is based on two different cohort of students, there was an increase in the ACT scores over the two academic school years. The school in this study minimized costs by purchasing a small number of SAT prep books and using online practice questions that were free on the SAT and ACT websites.

In the previously mentioned article entitled Who Benefits Most From SAT Prep, Shaw (2011) supports the implementation of an SAT/ACT Prep course as outlined in the study as the implementation is based on similar premises. As Shaw (2011) suggests, students are capable of using the resources available to them to study for these standardized tests. The only difference between using their own abilities and paying a well-known test prep company is motivation in many cases with lower costs.

Table 5

2014-2016 ACT Score Comparison at Hertford County Early College High School

Year	School Composite Score	North Carolina Composite Score
2014-2015	17.3	18.5
2015-2016	18.0	18.6

Note. The table illustrates a comparison in overall ACT composite scores at Hertford County Early College High School between 2014-2015 and 2015-2016. The information was adopted from the ACT website.

According to Janelle Cox (2009-2018) in *A quick look at the Frayer Model Strategy*, the Frayer Model is useful in helping students improve retention of information as they prepare for the ACT and SAT, which is utilized in this study (Cox, 2009-2018).

College Success 101

The third school based intervention program implemented at the school in this study is a College Success 101 high school course that is designed by the school's principal in conjunction with the school's college liaison. The course standards and objectives are derived from the college course ACA 122 objectives and standards. Students enrolled in the course are taught basic skills to help them be more successful in their high school and college coursework, including: scheduling, time management, note-taking, essay writing, public speaking, reading analysis and comprehension, and presentation development.

Students are enrolled in the course if they earn a D or F in a college course as a form of remediation and is mandatory for students who are not earning a C or higher in one or more college courses during the previous semester. The college courses that students have earned a D or F in vary depending on the student and/or course. College Success 101 class sizes typically range between seventy to thirty students each semester. The school's principal teaches the course on Fridays between 1:30pm and 3:00pm which is when none of these students have college classes, but are usually assigned to an Academic Support class which is designed to support students in their academics by providing additional time for them to work on assignments. The principal is solely responsible for designing lesson plans, teaching students the course objectives, assessing students, tracking student attendance in the course, grading student assignments and inputting student grades into PowerSchool. The ultimate goal is to help students learn needed college course skills to help them earn higher grades and be more successful when they retake

the college course that resulted in the student(s) receiving a D or F. The skills that are taught in the course closely emulate skills covered in the college course ACA 122-College Success, such as basic soft skills, note taking, presentations, etc. These skill deficits have also been highlighted as needed areas of improvements by college course instructors and college faculty during quarterly and monthly meetings between the high school and college faculty.

Students are required to pass the course before they will be enrolled in any additional college courses in the upcoming semesters. Class is sometimes cancelled or postponed due to special events such as advisory which take place once a month for thirty minutes. Students complete a reflection as their final exam at the end of the course. The final exam requires students to explain the skills they learned in the course and how they will use the learned skills as they progress through their high school and college courses in the upcoming semesters. This reflection along with student performance in upcoming semesters will determine the overall success of the course. If the course is effective, the percentage of students who earn a D or F upon completion of the course should decrease

Advisory Period

In utilizing the Understanding by Design process to develop this program, nearly 50% of students express in a survey administered to students that they don't feel cared for or respected at school. The Advisory Period is designed to hopefully decrease the number of cases in which students feel uncared for or not respected.

The fourth school based intervention program implemented at the school in this study is a mandatory Advisory Period for all students. Students meet with their advisors every three weeks at the school in the study to help students be more successful in their high school and college courses. At the beginning of the academic school year, all full time school staff members are

randomly assigned ten students who they advise for thirty minutes every three weeks on the Friday following the release of Progress Reports from 1:30pm-2:00pm. During this time all other school activities are postponed to allow time for students to meet with their advisors. During advisory, staff members review students' grades in PowerSchool and Moodle, progress monitor and conference with their assigned students and follow up with parents as needed. Staff is also required to document the time they meet with their advisees for recordkeeping purposes and in the event any additional follow up is needed.

The ultimate goal of advisory is to ensure that each student at the school feels they have a caring staff member at the school who he/she can talk to about issues or concerns they may be having in regards to their academic progress. Advisory will be measured based on whether or not parents receive information regarding their child's academic progress, particularly if their child is not performing well in his or her classes. Advisory will also be measured based on whether or not staff is providing adequate feedback to students to help them be successful as measured by the number of students who earn no grade below a B within each nine week grading period. Staff is not measured based on whether or not the student adheres to the recommendations. The goal is to merely provide timely feedback and recommendations to students and/or parents in order to help them make informed decisions about their academic progress. As noted in the study and the Gessel (2012) article entitled *The Effects of Mandatory Study Hall on the Academic Performance of Student- Athletes*, the Advisory Period at the school in the study mimics the suggestions offered by Lehmann in effective advisory programs. Students are provided time to discuss issues with adults in the school who ensure that their academic, emotional, and social needs are met on a regular basis.

Utilizing quantitative data is important in this study in order for stakeholders to see if the programs implemented were effective or ineffective as related to overall student achievement. The program evaluation method is also important in this study because it removes subjectivity from personal perceptions. While individual teacher grading is subjective, looking at other forms of qualitative data will help offset the subjectivity of individual teacher grading practices through the use of unified school grading practices. Utilizing a unified grading system of 15% classwork, 15% homework, 15% quizzes, 15% projects, and 40% tests will ensure teacher grading practices are consistent. Administrative monitoring of grading and assignments will also help ensure teachers are providing students with a balance of all assignment categories to ensure assignment equity for all students.

CHAPTER 4: RESULTS

Chapter 4 presents the findings of this study. An internal, summative program evaluation is utilized for the purpose of this study. The school principal during the time of the study and principal investigator reviewed several indicators in the school's School Performance Grade data report over two consecutive academic school years (2014-2015 and 2015-2016) to measure the effectiveness of the four school based intervention programs to determine if there was an impact on student achievement based on state and national assessments, as well as in high school and college courses. This internal program evaluation will help stakeholders determine if the school based intervention programs raise student achievement or if alternative programs are needed to improve the selected indicators at this individual school in the study. A result of these findings was shared with internal and external stakeholders upon the completion of the study as reported by the North Carolina Department of Public Instruction.

Study Questions

There were four study questions associated with this study. The study questions are as follows:

1. Does the Advisory Period impact student academic performance based on teacher assigned grades at the school in the study?
2. Does the ACT Prep course impact student academic performance as measured by the ACT assessment at the school in the study?
3. Does the Study Hall Period impact student academic performance based on teacher assigned grades at the school in the study?
4. Does the College Success 101 course impact student academic performance as
5. measured by the college course assigned teacher grades at the school in the study?

Study Demographics

An internal, summative program evaluation was utilized for the purpose of this study. Public data sets released through local, state and national data sets were reviewed. Therefore, there were no participants in this study. The Early College High School had a population of 118 students in 2014-2015 and increased its population to 142 students in 2015-2016. The school served grades nine through thirteen, allowing an additional year for students to complete an associate's degree as well as a high school diploma. All students attending the school were either: on free and/or reduced lunch, a first generation college student, or at-risk of dropping out of high school.

Results from School Based Interventions

Data from four school-based intervention programs is examined in this study. The four interventions are as follows: mandatory Study Hall for all students in Grades 9-13, an ACT/SAT Prep course for students in Grade 11, a College Success course for all students in Grades 9-13 who earn a D or F grade in a college course which focuses on college prep skills for students, and an Advisory Period for all students in Grades 9-13.

Standardized test results were reviewed after the school based intervention programs were implemented at the Early College High School in northeastern North Carolina to determine if these programs improved student achievement as measured on benchmark assessments. The national assessments that will be used to measure effectiveness are the Scholastic Aptitude Test (SAT) and American College Testing (ACT) assessment. The results from the 2014-2015 and 2015-2016 academic school year data were used to determine the overall effectiveness of the four school-based intervention programs.

Study Question One

Does the Advisory Period impact student academic performance based on teacher assigned grades at the school in the study? One school based intervention programs implemented at the school was an Advisory Period. During this intervention, students met with their advisors every three weeks at the school in the study to help students be more successful in their high school and college courses. At the beginning of the academic school year, all full time school staff members were randomly assigned ten students who they advised for thirty minutes every three weeks on the Friday following the release of Progress Reports from 1:30pm-2:00pm. During this time, all other school activities were postponed to allow time for students to meet with their advisors. During advisory, staff members reviewed students' grades in PowerSchool and Moodle, progress monitored and conferenced with their assigned students and followed up with parents as needed. Staff was also required to document the time they met with their advisees for recordkeeping purposes and in the event any additional follow up was needed.

In 2014-2015, the number of students earning all As and Bs in their high school courses for Quarters 1 and 2 were constant at fifty-one students. During the third quarter, the number of students earning all As and Bs in high school courses increased by seventeen students totaling sixty-eight students. The number decreased to thirty six students during the fourth quarter.

In 2015-2016, the number of students earning all As and Bs in their high school courses for Quarter 1 was ninety-three with a decrease of twelve students to eighty-one students in Quarter 2. The number increased by thirteen students in Quarter 3 and decreased by forty-one students to fifty-three students in Quarter 4.

During both years in the study, there appeared to be a significant decrease in the number of students earning all As and Bs between Quarters 3 and 4, although there was smaller fluctuation between the subsequent quarters in the study as well (see Table 6).

Additionally, the school's four year cohort graduation rate data were analyzed to determine the overall effectiveness of the Advisory Period. Hertford County Early College High School had a 5% decrease in its four year cohort graduation rate between 2013-2014, an increase of 3.5% between 2014-2015, and another increase between 2015-2016. Cohort graduation rates for 2016-2017 have not been released during the time of this study (see Table 3).

During both years in the study, there appeared to be a significant decrease in the number of students earning all As and Bs between Quarters 3 and 4, although there was smaller fluctuation between the subsequent quarters in the study as well. For example, in 2014-2015, the number of students earning all As and Bs in their high school courses for Quarters 1 and 2 were constant at fifty-one students. During the third quarter, the number of students earning all As and Bs in high school courses increased by seventeen students totaling sixty-eight students. The number decreased to thirty six students during the fourth quarter.

In 2015-2016, the number of students earning all As and Bs in their high school courses for Quarter 1 was ninety-three with a decrease of twelve students to eighty-one students in Quarter 2. The number increased by thirteen students in Quarter 3 and decreased by forty-one students to fifty-three students in Quarter 4.

Additionally, the school's four year cohort graduation rate had a 5% decrease in its four year cohort graduation rate between 2013-2014, an increase of 3.5% between 2014-2015, and another increase between 2015-2016. Cohort graduation rates for 2016-2017 have not been released during the time of this study.

Table 6

Number of Students Earning A or A/B Honor Roll Status during Quarterly Grading Periods

Year	Quarterly Grading Period	Number of Students
2014-2015	Quarter 1	51 out of 118
2014-2015	Quarter 2	51 out of 118
2014-2015	Quarter 3	68 out of 118
2014-2015	Quarter 4	36 out of 118
2015-2016	Quarter 1	93 out of 142
2015-2016	Quarter 2	81 out of 142
2015-2016	Quarter 3	94 out of 142
2015-2016	Quarter 4	53 out of 142

Note. The table illustrates the number of students who earned A or A/B Honor Roll status during each quarterly grading period between 2014-2015 and 2015-2016.

Therefore, based on the data from this study, the Advisory Period had little to no impact on student academic performance.

Study Question Two

Does the ACT Prep course impact student academic performance as measured by the ACT assessment at the school in the study? One of the school based intervention programs implemented at the school in this study is an ACT/SAT Prep course for students in Grade 11 once per week for thirty minutes. Once again the Understanding by Design Process is utilized to set goals for the program prior to implementation. The school's overall ACT composite for 2014-2015 is 17.3 whereas the state average is 18.5. The school's overall ACT composite for 2015-2016 is 18.9 whereas the state average is 18.6. In looking at the data in Table 5 for the 2014-2015 and 2015-2016 school years, the schools shows an increase from 17.3 to 18.9 as composite scores for the school in this study. Although the data is based on two different cohort of students, the school's overall composite did increase.

Therefore, according to the data in this study, the ACT/SAT prep course did impact student academic performance as measured by the ACT assessment (see Table 5).

Study Question Three

Does the Study Hall Period impact student academic performance based on teacher assigned grades at the school in the study? As stated earlier, during both years in the study, there appeared to be a significant decrease in the number of students earning all As and Bs between Quarters 3 and 4, although there was smaller fluctuation between the subsequent quarters in the study as well. For example, in 2014-2015, the number of students earning all As and Bs in their high school courses for Quarters 1 and 2 were constant at fifty-one students. During the third quarter, the number of students earning all As and Bs in high school courses increased by

seventeen students totaling sixty-eight students. The number decreased to thirty six students during the fourth quarter.

In 2015-2016, the number of students earning all As and Bs in their high school courses for Quarter 1 was ninety-three with a decrease of twelve students to eighty-one students in Quarter 2. The number increased by thirteen students in Quarter 3 and decreased by forty-one students to fifty-three students in Quarter 4 (see Table 6).

In looking at the Fall district benchmark scores, English 2 scores decreased between 2013-2014, but increased in 2015 and 2016. Biology Fall benchmark scores decreased between 2013-2014, increased in 2015, and decreased in 2016. Math 1 Fall benchmark scores increased between 2013-2014, decreased in 2015 and 2016.

In looking at the Spring district benchmark scores, English 2 Spring benchmark scores decreased between 2014-2015, increased in 2016 and increased in 2017. Biology Spring benchmark scores decreased between 2014-2015, increased in 2016 and decreased in 2017. Math 1 Spring benchmark scores increased between 2014-2016, and decreased in 2017.

Fall benchmark score results at Hertford County Early College High School over a four year timespan (2013-2016). English 2 scores decreased between 2013-2014, but increased in 2015 and 2016. Biology Fall benchmark scores decreased between 2013-2014, increased in 2015, and decreased in 2016. Math 1 Fall benchmark scores increased between 2013-2014, decreased in 2015 and 2016 (see Table 7).

Spring benchmark scores results at Hertford County Early College High School over a four year time span (2014-2017). English 2 Spring benchmark scores decreased between 2014-2015, increased in 2016 and increased in 2017. Biology Spring benchmark scores decreased between 2014-2015, increased in 2016 and decreased in 2017. Math 1 Spring benchmark scores

Table 7

Benchmark Comparison Results (Fall 2013-Fall 2016)

Courses	October 2013	October 2014	October 2015	October 2016
English 2	51.3%	40.2%	51.4%	62.6%
Biology	54.3%	42.8%	47.6%	42.4%
Math 1	33.6%	36.1%	32.7%	21.5%

Note. The table illustrates a comparison in benchmark scores between 2013-2016 at the school in the study.

increased between 2014-2016, and decreased in 2017; however, there was an increase between the fall and spring benchmark scores in Math 1 in both years of the study (see Table 8).

Therefore, the data revealed that the Study Hall period had a positive impact on student academic performance when comparing Fall benchmark scores to Spring benchmark scores between 2013-2016 academic years. However, the data used to examine student's achieving honor roll during the academic year remained somewhat constant.

Study Question Four

Does the College Success 101 course impact student academic performance as measured by the college course assigned teacher grades at the school in the study? Another school based intervention program implemented at the school in this study is a College Success 101 high school course that is designed by the school's principal in conjunction with the school's college liaison. The course standards and objectives are derived from the college course ACA 122 objectives and standards. Students enrolled in the course are taught basic skills to help them be more successful in their high school and college coursework, including: scheduling, time management, note-taking, essay writing, public speaking, reading analysis and comprehension, and presentation development.

At Hertford County Early College, there were twenty-four students enrolled in College Success in the Fall 2015 semester, thirteen students enrolled in the Spring 2016 semester, nine enrolled in the Fall 2016 semester, and 10 enrolled in the Spring 2017 semester. There was a fourteen student decrease in the number of students having to complete the College Success course between Fall 2015 and Spring 2017. Therefore, the College Success 101 course did impact student academic performance as measured by the college course assigned teacher grades (see Table 9).

Table 8

Hertford County Early College Benchmark Comparison Results (Spring 2014-Spring 2017)

Courses	March 2014	March 2015	March 2016	March 2017
English 2	51.3%	43.8%	58.2%	63.0%
Biology	54.3%	50.8%	63.8%	53.0%
Math 1	33.6%	37.5%	40.1%	31.6%

Note. The table illustrates a comparison in End-of-course tested courses between 2014-2017 at Hertford County Early College High School.

Table 9

Number of Students Earning D or F Grade in One or More College Course(s)

Semester	Number of Students
Fall 2015	24
Spring 2016	13
Fall 2016	9
Spring 2017	10

Note. Table 9 illustrates the number of students who earned a D or F in a college course between 2014-2016 and as a result are enrolled in the College Success 101 course.

Summary

Quantitative data were used to examine the effectiveness of four school-based research intervention programs to determine if these interventions were helping better prepare students for post secondary education. Based on the results of this study, all four intervention programs positively impacted student academic achievement, although some programs had a greater impact than others.

CHAPTER 5: SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

As indicated in Chapter 1, the focus of this study was to determine if four research-based intervention programs impacted student academic achievement. Specifically, the researcher investigated if these programs increased student academic performance based on local and national assessments. This chapter is presented in three sections: (a) Summary, (b) Recommendations, and (c) Conclusions.

Summary

The purpose of this study was to examine the effects of four school-based programs on student academic performance at an early college high school in northeastern North Carolina. The four school-based intervention programs that were examined in this study are as follows: mandatory Study Hall for all students in Grades 9-13, an ACT/SAT Prep course for students in Grade 11, a College Success course for all students in Grades 9-13 who earn a D or F grade in a college course which focuses on college prep skills for students, and an Advisory Period for all students in grades 9-13. Standardized test results were reviewed after the school based intervention programs were implemented at the Early College High School in northeastern North Carolina to determine if these programs improved student achievement as measured on standardized test scores through local and national assessments since a high rate of students were planning to attend college, but were not ready as measured by college readiness assessments. The local assessments that were examined to determine the effectiveness of the programs were TE21 Benchmark assessments in Math 1, Biology, and English 2. The national assessment that was used to measure effectiveness was the American College Testing (ACT) assessment. All four programs were designed to help increase student accountability and provide students with skills

to be successful during high school and college upon graduating from high school as measured by local and national assessments.

There was a significant decrease in the number of students earning all As and Bs between Quarters 3 and 4 during both years of the study, although there was smaller fluctuation between the subsequent quarters in the study and teacher assigned student grades remained stable and constant.

ACT Composite scores increased from 17.3 to 18.9 between 2014-2015 and 2015-2016; but two different cohorts of students yield undetermined impact; however, for the sake of the study, there was a positive overall composite score for the two years examined in the study.

English and Biology benchmark scores increased during Year 2 in the study during both Spring and Fall semesters; Math 1 benchmark scores decreased during Year 2 in the study during both Spring and Fall semesters; however, there was an increase between Fall and Spring benchmarks each year in the study, with the exception of Year 1 in Biology which remained constant between the fall and spring semesters.

There was a fourteen student decrease in the number of students having to complete the College Success course between Fall 2015 and Spring 2017. Additionally, there was an increase in four year cohort Graduation rates during the two years in the study.

Recommendations

The purpose of this study was to examine the effects of four school-based programs on student academic performance at an early college high school in northeastern North Carolina. As noted in Chapter 1, there is an alarming number of students who graduate from high school and feel unprepared for college as demonstrated on local, state, and national assessments. If students enter college without the necessary skills to be successful, it will be extremely difficult for them

to be successful while in college. The school in the study was determined to brainstorm effective ways to increase student academic performance on local, state, and national assessments.

Specifically, this study examined the effects of four school based intervention programs to determine if these programs had any bearing on student achievement. The study also examined how students performed academically in their courses and on standardized benchmark assessments after participating in the school-based intervention programs. Based on the results of this study, recommendations were made in the areas of research and practice.

In the area of research, two recommendations were made. Those recommendations were as follows: (1) replicate this study for other early college high school programs using research-based intervention programs and; (2) additional research on best practices to help prepare high school students to be successful in college courses.

In the area of practice, four recommendations were made. Those recommendations were as follows: (1) allow time for students to complete assignments during the school day; (2) allow time for students to receive tutoring during the school day; (3) develop courses to better prepare students for local, national, and state assessments; and (4) implement the three aforementioned recommendations with fidelity.

Recommendations for Research

Research Recommendation One

There is a need to replicate this study for other early college high school programs using research-based intervention programs. If other early colleges are able to replicate this study effectively, educators at these other early colleges will be able to help raise student achievement at their early college high schools. Additionally, they will be able to help better prepare students

for postsecondary education if they are able to effectively replicate the interventions in this study.

Research Recommendation Two

Additional research on best practices to help prepare high school students to be successful in college courses is also needed. If educators and lawmakers can effectively research best practices to help prepare high school students to be successful in college courses, more students will be prepared for postsecondary education which will continue to raise student achievement.

Recommendations for Practice

Practice Recommendation One

As noted in the study, student achievement can be improved when students have structured time to work on assignments while they are at school; since some students have outside commitments such as extracurricular activities, jobs, or personal responsibilities, they can benefit from having designated time to work on assignments at school to ensure they don't fall behind on school assignments.

Practice Recommendation Two

Students can also benefit from having designated times during the day to receive tutoring services when they are having difficulties in classes. When students have questions or find themselves struggling to understand class materials, they need to be able to have their questions answered in order for them to better understand the material being covered in their class(es).

Practice Recommendation Three

Schools can also better serve students by developing courses to better prepare students for local and national assessments. Since there was a slight increase on the ACT assessment

during the two years examined in this study, the argument that test prep courses are needed is strengthened. When implemented with consistency and using research-based test preparation materials and methods, students can show a greater rate of success on these assessments.

Practice Recommendation Four

Implement the three aforementioned recommendations with fidelity. As the research supports, school-based interventions can be effective when implemented with fidelity as shown in the study results.

This study stresses the importance of school-based intervention programs, including allowing time for students to work on assignments, obtain tutoring if needed in subject areas, attend courses specifically designed to help students prepare for assessments, etc. The study also stresses the importance of implementation fidelity for overall effectiveness. The study also stresses that there will be some barriers beyond one's control when conducting a program evaluation. Barriers including lack of focus, time restraints, and lack of resources should be removed whenever possible in order to help students be successful.

Conclusion

Quantitative data was used to address the four study questions in the study. The data used were results on local benchmarks, teacher assigned grades, number of students who earned honor roll status, and ACT results.

Each staff member had varying education and degree levels. Because of the varying levels of staff educational experience, some staff members had a difficult time prescribing needed help to students outside of generic recommendations, such as tutoring for students who were not performing well in their classes. Staff members who held standard bachelor's and/or master's degrees typically had more knowledge of the academic preparation that was needed to

help guide students, since they had all been exposed to additional pedagogical trainings, whereas staff members without degrees appeared to have a more difficult time providing academic guidance to the students as a means of preparing them for postsecondary education.

More specifically, it is important to note that several of the teachers in the study possessed varying degrees in their assigned teaching areas and the level of collaboration varied as well. For example, the Math 1 teacher was not certified during the time of the study and was a first year teacher during the start of the study. The English and biology teachers were certified and had been teaching for multiple years. They also planned cross-curricular units to help the students truly master the content in English and Biology.

It should also be noted that the decrease in the number of students earning honor roll status between third and fourth quarter could be seen from student's being fatigued and burned out as the end of the school year approached and students were completing final exams and course assignments due to outside commitments that often superseded school expectations. For example, students had jobs, participated in extracurricular activities, and had to babysit younger siblings so parents could work. All of these components may have hindered students from being able to effectively focus on and complete school assignments.

Student grades signified that students who attended the ACT/SAT prep sessions regularly showed an increase in their overall performance during the sessions, which supports the literature review that intervention program effectiveness is often based on the amount of fidelity put into the program from both the student and teacher.

Study Hall effectiveness depended upon the level of structure implemented by the instructor. Instructors who required students to remain focused and on task yielded positive results for students. Instructors who were less structured yielded less favorable results. However,

the students were observed completing assignments during Study Hall and/or receiving tutoring to help them increase their grades. Students ensured they attended Study Hall once they realized their teachers were going to track their whereabouts if they were out of place.

Over the duration of the study, students became more comfortable with having a Study Hall period built into their day since a significant number of students in the study worked jobs after school, babysit younger siblings, played sports or participated in extracurricular activities which limited the amount of time they had outside of school to complete assignments. Therefore, building time for completing work during the normal school day was crucial for student success for some students at the school.

There was a constant decrease in the number of failed college courses over the course of the school years in the study. At the beginning of the study, there were twenty-four students enrolled in the College Success course due to earning a D or F in at least one college course. At the conclusion of the study, this number had decreased to ten students. An additional conclusion that was drawn from the decrease in the number of students enrolled in the College Success 101 course is attributed to the activities utilized with students to help them be successful in their college courses. Having personally designed this course, the class activities mimicked course assignments that students would see in their college classes and helped familiarize them with managing their time better and effective essay writing.

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APPENDIX A: INSTITUTIONAL REVIEW BOARD APPROVAL

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office 252-744-2914 · Fax 252-744-2284 · www.ecu.edu/ORIC/irb

Not Human Subject Research Certification

From: Social/Behavioral IRB
To: Bryan Ruffin
CC: Art Rouse
Date: 1/24/2018
Re: UMCIRB 17-002293
Social/Behavioral IRB

On 1/24/18, the IRB Staff reviewed your proposed research and determined that it does not meet the federal definitions of research involving human participants, as applied by East Carolina University.

Therefore, it is with this determination that you may proceed with your research activity and no further action will be required. However, if you should want to modify your research activity, you must submit notification to the IRB before amending or altering this research activity to ensure that the proposed changes do not require additional UMCIRB review.

The UMCIRB appreciates your dedication to the ethical conduct of research. It is your responsibility to ensure that this research is being conducted in accordance with University policies and procedures, the ethical principles set forth in the Belmont Report, and the ethical standards of your profession. If you have questions or require additional information, please feel free to contact the UMCIRB office at 252-744-2914.

APPENDIX B: STUDENT SIGN-IN SHEET

Student's Name	Date	Assignment

APPENDIX C: NORTH CAROLINA PUBLIC SCHOOL ACCOUNTABILITY HISTORY

North Carolina Public School Accountability History

According to the North Carolina Department of Public Instruction (2015), public school accountability has existed in North Carolina since the early 1990s. North Carolina's accountability model allows stakeholders to review the performance of students at the school, district, and state levels. In 2013, Legislation (G.S. §115C-83.15) passed by the North Carolina General Assembly required the inclusion of School Performance Grades as part of North Carolina School Report Cards. North Carolina typically releases district and state accountability results in August. North Carolina School Report Cards are released in October to provide more detailed information about student performance and other school data that may be of interest to key stakeholders and special interest groups. All schools receiving funding from the state of North Carolina are required to receive an A-F letter grade. Beginning in the 2015-16 school year, the North Carolina School Report Cards were released in September and incorporated both the School Performance Grades and state READY accountability results.

The North Carolina Department of Public Instruction (2015) released a supplemental School Performance Grade brief, which stated that School Performance Grades would base 80% on the school's achievement score and 20% on students' academic growth, using a combination of North Carolina End-of-Grade tests, North Carolina End-of-Course tests, standardized tests including the ACT, and growth on state assessments as measured by EVAAS (Education Value-Added Assessment System). The School Performance Grade is based on the following 15-point scale for the 2013-14 school year only (A = 85-100 B = 70-84 C = 55-69 D = 40-54 F = Less than 40). Although the North Carolina Department of Public Instruction supplemental brief

states, beginning in 2014-15, a 10-point grading scale will be used, North Carolina only utilizes the 15-point grading scale since public and charter schools began receiving School Performance Grades during the 2013-2014 school year.

The North Carolina Department of Public Instruction released an assessment brief entitled *Understanding Testing: North Carolina High School Comprehensive Test* (1999). The brief states, The North Carolina Accountability model was designed to provide student achievement data to the public based on students' academic progress in North Carolina. The North Carolina ABCs Accountability Program began in grades K-8 during the 1996-1997 school year; the high school accountability program was implemented during the 1997-1998 school year. The North Carolina High School Comprehensive Test— Reading and Mathematics was approved by the State Board of Education at its March 1997 meeting as a component of the ABCs accountability model for high schools effective with the 1998-99 school year. Because the ABCs of Public Education emphasizes performance in the basic skills, the high school comprehensive test focuses on the assessment of reading and mathematics. This multiple-choice test was developed to measure growth in student achievement in reading and mathematics from grade 8 to grade 10 for the purpose of high school accountability (Assessment Brief, 1999 Spring).

North Carolina School Performance Grading System

According to Public Schools First North Carolina (2016), a statewide nonpartisan organization focused solely on public education issues, In 2013, the NC General Assembly passed the Excellent Public Schools Act as part IX of its *Appropriations Act of 2013.* Section 9.4 of this Act calls for the annual awarding of individual A-F school performance grades based on:

- 80% of the weight of the grade is based on test results (end-of-grade, end-of-course, graduation rate, college/workplace readiness measures)
- 20% of the weight of the grade is based on school growth as measured by SAS EVAAS (Education Value-Added Assessment System).
- Only public, charter, and alternative schools are graded. Public schools are compared to other schools in the same district. For the 2015-16 school year, 2,459 of 2,601 public and charter schools received grades.
- Charter schools are independent of the school districts in which they are located and are not part of a local comparison.
- Private, Federal, state-operated, and other special schools are not graded due to differences in the way data are reported for these schools.
- Per the Department of Public Instruction, "quality teacher data are limited for charter schools due to the flexibility allowed in their operations." All traditional public school teachers must be certified, while only 50% of charter school teachers are required to be certified.
- Grades & Cut Scores created in 2013 on a 15-point scale:
    - A = 85-100
    - B = 70-84
    - C = 55-69
    - D = 40-54
    - F = 0-39
- Schools that earn an A and do not have significant achievement and/or graduation gaps are designated as A+NG schools.

- Public schools had a lower percentage of Ds and Fs than charter schools (23% vs. 28%).
- Charters had a higher percentage of As and Bs than public schools (40% vs. 32%).
- North Carolinas two virtual charter schools each earned a D performance grade by combining Cs in reading with Fs in math.
- Schools with greater poverty had more Cs, Ds, and Fs than schools with less poverty.
- 98% schools that received an F had 50% or more poverty.
- This is the first year that school grades will be used to determine which schools will be taken over by the state of North Carolina.

Supporters of North Carolina's School Performance Grading System believe that the School Performance Grading system holds schools more accountable because it requires schools to focus on targeted school improvement and provides parents with data about school performance. Critics argue that the School Performance Grading System does not adequately measure the learning that is taking place in school nor does it take into account the economical effects that this system will have on property values and home sales. Critics also believe the system is not feasible in that the funding does not accompany the requirements to improve grades and that student growth is devalued in the current grading model (Public Schools First NC, 2016).