NORTH CAROLINA COLLEGE INSTRUCTORS' AND HIGH SCHOOL TEACHERS' PERCEPTIONS OF THE EARLY COLLEGE PROGRAM

by

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ABSTRACT

RUTH DELIA PARKER. North Carolina college instructors' and high school teachers' perception of the early college program. (Under the direction of DR. JOHN A. GRETES)

The purpose of this quantitative study was to explore the perceptions of college instructors and high school teachers regarding the purpose and benefits of the Early College High School program in North Carolina. College instructors and high school teachers, from all 69 Early College High Schools in North Carolina, were invited to participate in a survey using a model that was previously designed and tested by Dr. Jason Chambers titled North Carolina Early College High School Survey. This instrument, a web based survey, was used to measure perceptions of the purpose and benefits of the Early College High School. One hundred-thirty-two high school and college instructors who have taught Early College High School students completed the study's survey questions.

A review of the results included statistically significant differences in the perception of purpose of the Early College High School between High School teachers and College instructors. The results similarly included statistically significant differences in the perception of the benefits of the Early College High School between High School teachers and College instructors. The results for the combined perception of purpose and benefits, were statistically significant among the three geographic regions; Mountain, Coastal plains, and Piedmont.

DEDICATION

This doctoral study is dedicated to my father, John Nicholas Delia Sr. who was my inspiration in the pursuit of my doctorate degree. He believes strongly in education and was at my side throughout my educational journey. He is the epitome of The Greatest Generation; a Pearl Harbor Survivor; a wonderful husband (according to my mother); a great father. Working almost his entire life, he instilled a unique work ethic into his children; he retired from 3 careers. He has encouraged me every step of the way and is my guiding light.

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CHAPTER 1: INTRODUCTION

The United States is a highly developed nation that is facing the difficult challenge of not producing enough qualified people to fill current and future jobs. With over a million students dropping out of high school each year, the country's ability to produce well educated people, to compete in the marketplace of the future, looks bleak. The workforce lacks critical skills and work readiness competencies to fill positions that are being vacated by the older generation (Theis, 2009). Dr. Audrey Theis, a workforce development consultant, states that the U.S. is the only highly developed democracy where young adults are less likely to have completed high school than the previous generation. She further states that almost twice as many jobs over the next decade will require a postsecondary credential or college degree. This translates to an increase from 25% in today's marketplace, to nearly 50% over the next decade (Theis, 2009).

Today, an individual needs a higher degree of education to compete in the job market. Statistical reports have shown that the higher the education the more potential your earnings. An article in Alliance for Excellent Education (October 2007) states the monetary difference could vary as much as $9,000.00 per year between the earnings of a high school dropout and a high school graduate. A person who has earned an Associates' degree will earn approximately $19,000 more per year than a dropout; someone who has earned a Bachelor's degree, can earn in excess of $45,000 more than a high school

dropout (Alliance for Excellent Education, 2009). Dropping out of high school not only affects an individual's earning potential it affects the nation's economy. A research study conducted by Dr. Cecilia Rouse of Princeton University (2005) shows that a single high school dropout will cost the nation approximately $260,000 over a (Alliance for Excellent Education, 2009). With millions of students dropping out of high school each year the nation loses trillions of dollars in income, but more importantly a child fails to achieve success.

In order to help resolve the education and economic problems, every person from the President of the United States to the student just entering school will need to become involved in the educational process. In May 2009, President Barack Obama called for intensified efforts to increase degree attainment in the United States, arguing that raising education attainment rates will sustain and enhance the country's economic competitiveness globally (Kazis, 2009). On July 14, 2009, the President unveiled his plan for an unprecedented federal commitment to supporting student success (Kazis, 2009). To start this project, President Obama in a nationwide television broadcast on September 8, 2009, addressed the schoolchildren of America. In his speech, he outlined the responsibilities of every person in the United Stated to provide the children of America with the opportunity to succeed through education. He explained to the students that it is their responsibility to stay in school, learn, and achieve their life-long goals (Obama, 2009).

President Obama believes it is important to become involved in the education of America's children because of the dropout and economic crisis that America is facing. A more in-depth discussion of the dropout rate and the effects that it has on the economy

will be discussed in more detail in the next chapter. Although the dropout rate is approximately 25% in America, the National Center for Educational Statistics (NCES) reports that high school dropout rates are actually decreasing (National Center for Educational Statistics , 2010). Part of this decrease may be due to an initiative where high schools and colleges are working together to create an environment where low income and underprivileged students can have access to higher education. This program, known as the Early College High School Initiative (ECHSI), began in 2002 with three schools and has grown to 212 schools in 24 states, serving more than 47,000 students (Shaughnessy 2010; Jobs for the Future 2010). Various articles written about ECHSI deem that the philosophy behind early college; underachieving students can succeed when challenged by rigorous coursework and are in an environment of personal support, will provide an avenue of higher learning for the underrepresented high school student identified as; low performing, at-risk students (Jobs for the Future, 2003). Associate Vice President and Co-Director of the Early College High School Initiative, Michael Webb, recants statistics during an interview that show students that graduate from an Early College High School program will not only earn their high school diploma, but on average will earn 23 college transfer credits (Shaughnessy, 2010). Although this program is in its infancy, it appears to be showing excellent progress with preliminary graduation results of 92% (Lewin, 2010).

In researching the Early College High School Initiative there are many positive responses to the initiative's success; however, as this program nationwide is less than 10 years old, there is little statistical information on its success. In gathering information for this study, two parts of the initiative's design remained constant; the purpose and the

benefits of the Early College High School. The perceptions of these characteristics by college instructors and high school teachers will become a source of information that will better aid in understanding the Early College High School concepts and its contributions in education. The literature on perception suggests that individual viewpoints may vary regarding similar situations (Anderson, 2009) Paulo Freire in his book *Pedagogy of the Oppressed* describes perception as an explicit awareness; when we perceive a concept we draw from our individual backgrounds and enter knowledge to determine the outcome. (Freire, 2000) With the knowledge that perception can aid in determining an outcome, the purpose of this study is to explore and analyze the perceptions of North Carolina college instructors and high school teachers regarding the Early College High School Initiative. This will allow gathering of data to determine if the ECHSI can be fully applied or the program needs review and change instituted.

Research Questions

The research questions for this study focused on the design of the Early College High School, specifically the purpose and benefits to students and institutions. The following research questions will guide this study:

1. What are the perceptions of college instructors regarding the purpose of the Early College High School Initiative in North Carolina?
2. What are the perceptions of high school teachers regarding the purpose of the Early College High School Initiative in North Carolina?
3. What are the perceptions of college instructors regarding the educational benefits of the Early College High School Initiative in North Carolina?
4. What are the perceptions of high school teachers regarding the educational

benefits of the Early College High School Initiative in North Carolina?

5. Are there significant differences in the perceptions of college Instructors and high school teachers regarding the purpose and benefits of the Early College High School Initiative in North Carolina?
6. Are there significant differences in the perceptions of college instructors and high school teachers regarding the purpose and the benefits of the Early College High School Initiative in North Carolina from schools that have held graduations and those who have yet to hold a graduating?
7. Are there significant differences in the perceptions of college instructors and high school teachers within the three regions of North Carolina (Mountain, Coastal Plains, and Piedmont) regarding the purpose and the benefits of the Early College High School Initiative in North Carolina?

Delimitations

This study has the following delimitations:

1. Region of study will be North Carolina.
2. Sample will include only high school and college instructors teaching students associated with the Early College High School.
3. Only Early College High Schools located on College campuses will be included in this study.
4. Communication will occur with Early College High School Liaisons to gain access to the sample population and for distribution of information and surveys.
5. Survey will be administered online for convenience, ease of accessibility, and cost containment.

Limitations

This study has the following limitations:

1. Lack of control over the number of educators who complete the survey. Although high school teachers are permanently assigned to the cohort of students, college instructors are not and many college instructors may become a part of the student's Early College High School experience.
2. Lack of control over how many schools respond to the survey.
3. Perceptions obtained using survey may not accurately reflect knowledge of participants.

Overview of Method

This study will employ a quantitative methodology, using a survey as the instrument. The instrument will be a series of survey questions that will be answered by high school and college instructors who teach Early College High School Students. North Carolina Early College High School Liaisons will be asked have faculty who are teaching Early College High School Students to participate in a survey. The survey items are from a previous instrument created by Dr. Jason Chambers in his 2009 dissertation titled "*North Carolina Community College Presidents' and School Superintendents Perception of the Early College*." As Dr. Chambers' study and this study are seeking similar information, his instrument will be replicated in this study. This instrument, which will be discussed in detail in Chapter 2, has shown to be reliable and valid. The survey that was created from Dr. Chambers' instrument was an Internet-based survey to provide easy access for all instructors who were asked to participate. Using a four response Likert-type scale, data were downloaded, coded, and examined to determine the

perceptions of the Early College High School teachers and college instructors in regards to the purpose and benefits of the Early College High School Initiative in North Carolina. This is furthered discussed in the methodology section of this paper.

Definitions of Key Terms

The key terms and definitions used in this study are:

College Instructor – A credentialed individual who teaches college courses within an Early College High School environment.

Community College - A two-year institution of higher education, generally public, offering instruction adapted in content, level, and schedule to the needs of the community in which it is located (Baker, 1994).

Dropout – Students who start in any high school program but do not graduate with a diploma or a General Education degree.

Early College High School - A small, autonomous high school located on a college campus where students earn a high school diploma and an associate's degree in four to five years (New Schools Project, 2005).

Early College High School Liaison- A college faculty member or an administrator who has access to the president and the respect of the faculty, who can promote the concept, command resources, and facilitate support and collaboration. The concept requires the support of the financial aid office and the admissions staff to facilitate high school students' registration for college courses. (Lieberman 2004)

High School Teacher – A credentialed individual who teaches high school courses within an Early College environment.

Jobs for the Future - An action/research and policy organization that promotes innovation in education and workforce development, is the lead coordinator, manager, and policy advocate for the Early College High School Initiative (A Portrait in Numbers, 2008).

Middle College High School- A high school located on a college campus that allows students to earn some college credit, but usually not an entire college degree (Cunningham & Wagonlander, 2000).

New Schools Project – Collective effort between North Carolina and its partners to develop innovative high schools throughout North Carolina. These high schools will offer all students an academically rigorous curriculum grounded in the skills needed to succeed in college and the 21st century workplace. (New Schools Project, 2009)

Summary

In Chapter 1 the researcher introduced the topic, outlined the purpose of the study, stated the research questions to be addressed, provided delimitations and limitations, and reviewed the definition of terms for this study. Chapter 2 Literature Review, explores the related literature that was used as a foundation for the study of the perceptions of North Carolina College Instructors and the High School Teachers regarding the purpose and benefits of the Early College High School. Chapter 3 Method includes the research design and information on the method to be used in the study. Chapter 4; Results, contains the data analysis and the outcomes of the study. It includes the description of the sample population, as well as the findings specific to the research questions defined within this study. The final chapter, Chapter Five, Conclusions and Recommendations,

interprets the results and discuss the findings of the study and recommendations for future studies.

CHAPTER 2: LITERATURE REVIEW

The purpose of this chapter is to provide a review of literature related to information that reflects the formation of the Early College High School Initiative. The chapter begins with a look at the reasons the Early College High School was designed. In order to understand the inception of the Early College High School, this researcher looked at various characteristic that led to the rationale of the initiative. These characteristics featured a trickledown effect whereby the main focus was on the enormous national high school dropout rate in the United States. Because the dropout rate was so high, it affected the number of students entering into higher education, which affected the number of qualified applicants to fill current and future jobs (Theis, 2009). Further, this lack of qualified employees prevents businesses from growing. If a business does not grow, it will become flat and possibly non-productive. Without employment, the federal and state governments do not receive the tax monies from employed individuals. Instead, the economy suffers as the government is paying out money in the form of unemployment benefits, welfare, health care, and food stamps. (Alliance for Excellent Education, 2009).

The second section is a background investigation of the Early College High School, which will include the elements that make the Early College High School a viable solution for high school dropouts. Throughout the background investigation, more information about the purpose and benefits of the Early College High School will materialize.

The third section is a breakdown of North Carolina's efforts to decrease high school dropouts and the implementation of the Early College High School Initiative known as the New Schools Project.

The chapter will conclude with a review of a survey instrument created by Dr. Jason Chambers in order to assess perceptions of the purpose and benefits of the Early College High School Initiative between high school teachers and college instructors.

Utilizing all of the information gathered in the literature review a survey was designed to elicit responses from North Carolina high school and college instructors on their perception of the purpose and benefits of the Early College High School Initiative.

High Schools and the Dropout Rate

Nobel Peace Prize winner, Nelson Mandela, stated, "Education is the most powerful weapon which you can use to change the world" (BrainyQuote.com, n.d.). Jean Piaget relates that the goal of education "is to create men who are capable of doing new things, not simply of repeating what other generations have done – men who are creative, inventive, and discoverers" (BrainyQuote.com, n.d.).

The educational goal in the United States is that a student will graduate high school and attend college or become gainfully employed (Bae 2006). However, dropping out of high school has become a serious educational and social issue that is not only costly to the individual but also contains social and economic ramifications such as not being able to advance in their job or improve their quality of life (Gasper, 2009).

In researching the dropout rate trend, there is an obvious disagreement in what rate should be used to determine the total rate of non-graduates. Reasons for this discrepancy are that some researchers use the Common Core of Data (CCD) from the

National Center for Educational Statistics (NCES) while others use Current Population Survey data (CPS) from the U.S. Census Bureau. The difference, CCD reports on administrative data on enrollment and diplomas that schools report to their districts yearly and CPS is the information derived from information given from a self-reporting public (National Center for Educational Statistics, 2010). CCD statistics do not provide any information about private schools and only count those students who obtain high school diplomas whereas CPS counts public and private high school graduates and counts both high school graduates and GED holders as graduates. However, since CPS is derived from self-reports of enrollment from respondents to the Census Bureau questionnaires the respondents may exaggerate their children's enrollment status in high school either due to social desirability or to confusion about their child's enrollment status (Warren and Halpern-Manners, 2007). Therefore, this research report will use the National Center for Educational Statistics (NCES) data, as this is the principal federal agency that collects and analyzes data on education in the United States and appear to be more reliable. (Fedstats, 2007).

A look at the past 50 years of the educational system will provide an overview of the growth and decline of dropout rates in the United States. In the 1960s, the dropout rate decreased to 20%, significantly lower than the 50% dropout rate in the 1950s. In the early 1970s and 1980s, the dropout rate changed little from the 1960s staying at the 20% level during the two decades. In the 1990s, the graduation rate leveled off at approximately 86% (Baldwin, Moffett & Lane, 1992; NCES, 2000). However, in the 21st century, the nation faces one of the highest dropout rates in the industrialized world (Lang, 2009). The 2007-2008 National Center for Educational Statistics (NCES) data

reported that the total freshman graduation rate was 74.9%, which means that approximately 25.1% of students are dropouts. A further breakdown by ethnicity reveals that of those high school students who failed to earn a diploma in four years, approximately half were African-American and Latino students. (Steinberg & Almeida, 2004). Michael Wotorson, the executive director of the Campaign for High School Equity states in an article that "The one consistency in our education system is in our high schools that fail to provide students of color and youth from low-income neighborhoods with the high-quality education they need to succeed in college and in the modern workplace" (Committee on Education and Labor, 2009). Addressing opportunities for students of color and youths from low-income neighborhoods will become one of the main purposes of the Early College High School Initiative.

North Carolina dropout rates are similar to the other states in the United States. During the 2008 – 2009 school year in North Carolina, approximately 28.9% of students dropped out of high school. Of those students, 36.8% were Black, 41.1% were Hispanic, and 40% were American Indian (NC Report Cards 2009).

We are a nation that depends on the continuous employment of our youth to carry on our growth as a nation by filling current and future jobs. It is becoming more clear that the skills necessary to fill employment positions in the 21st century is going to depend on a high school diploma. Recently, Congress has bailed out many companies due to financial burdens. Bob Wise, president of Alliance for Excellent Education and the former Governor of West Virginia, recently addressed these bail-outs as he addressed Congress, "the enormous cost of bailing out the banks, financial institutions, the auto industry, and AIG is still less than the economic cost of just five years of dropouts in the

United States." Wise concluded with, "That is why I believe that the ultimate economic stimulus package is a diploma" (Amos 2009). Dropping out of school not only hurts the students but has a major effect on our nation's economy.

Effect on the Nation's Economy

Nearly 6.2 million students in the United States between the ages of 16 and 24 dropped out of high school in 2007 (US Department of Education, 2010). This cost is an enormous burden on the America people as high school dropouts earn about $9,245 less per year than high school graduates (Doland 2001). Nearly half of all head of households on welfare and one-half of all high school dropouts are jobless (Sum et al. 2003). These situations mean less income for the family and fewer taxes to the government in which to support other programs. In terms of cost, taxpayers pay in excess of $75 billion annually in welfare benefits and lost tax revenue because of the dropout problem (Catterall, 1985; Baldwin, Moffett & Lane, 1992). These figures include costs such as subsidized housing, food stamps, and the dropout's future family. There is a higher chance that the child of a dropout will also dropout of school. Statistics indicate that the dropout rates for students from lower income households is three times that of the national average when compared to those students in middle income households (NCES, 2000). Medical risks are higher for dropouts as there is a greater risk of drug and alcohol abuse (Cram et al. 1998) and a shorter life expectancy (Alliance for Excellent Education 2003). Furthermore, dropouts are more likely to end up in jail at some point in their lifetime, placing the burden of support on the taxpayers (Alliance for Excellent Education, 2003). Approximately 41 percent of prison inmates in our penal system are high school dropouts (Harlow 2003).

Over the past decade, several programs have been instituted to help students advance in education. High school students who can earn college credits have become a national interest. Several programs including Dual Enrollment, Advanced Placement (AP), Huskins, Middle College, and the Learn and Earn Online program top the efforts to help High School students earn college credit. Although these programs have been effective, the programs did not satisfy Mr. Wotorson's concern that our education system was failing to provide students of color and youth from low-income neighborhoods with the high-quality education opportunities that are needed to succeed in college.

In 2002 a new program emerged that would address Mr. Wotorson's concerns entitled the Early College High School Initiative. The focus of this program was to help first-generation, low-income English language learners and students of color obtain an associate's degree or two years of college and the opportunity to attain a baccalaureate degree (Jobs for the Future, 2003). Funding for the Early College High School Initiative comes from Jobs for the Future (JJF). JFF is a partnership to accelerate opportunity for people to advance education and careers. It provides the funding for critical initiatives that have been created to help people obtain academic success. JFF has collaborated with 13 other organizations to help sponsor the Early College High School Initiative. The organization promotes the initiative and believes that "*challenge not remediation"* (Jobs for the Future, 2003) will make a difference. Some educators are concerned with the rapid growth of the Early College High School. These educators are afraid the acceleration of coursework will hurt rather than aid in the education of the underprivileged high school student (Jacobson, 2005). It is true that the model will not fit every student however Tom Vander Ark, Executive Director of Education for the Gates

Foundation, believes "with appropriate preparation and support, low-income kids can succeed in a rigorous curriculum, the kind of curriculum that suburban white kids have had increasing access to for years" (Jacobson, 2005).

The Early College High School Initiative is perhaps the most ambitious attempt to integrate high schools and colleges. However, the design was not developed in a few days; a committee had researched various aspects of the initiative for two years before the design was developed (Lieberman, 2004). In order to understand the concepts and development of the initiative, the following section will look at the history of the Early College High School beginning with Bard College which was the foundation for the initiative's design and end with a look at the North Carolina New Schools program and the rapid spread of the initiative across the state.

History of the Early Colleges High School

Bard College

The beginning of the Early College High School starts in 1964 when Elizabeth Blodgett Hall founded a school for women in Great Barrington, Massachusetts. She named the school Simon's Rock in memory a small boy who would climb on a large rock in the area. As a former headmistress for a private girl's academy in Concord Massachusetts, Ms. Hall felt that there was a need for more education options for young people and believed that a school should help with emotional as well as intellectual maturity (Stoel, 1988; Kisker, 2006). Originally a women's school, Simon's Rock offered a four-year program that combined the last two years of high school with the first two years of college. The focus of the school was that upon the completion of their four years of schooling, women would receive an Associate of Arts (AA) degree. Ms. Hall worked

with her faculty to develop a solid curriculum and with her staff to design a plan to recruit students to attend the college. In the fall of 1966, the school opened its doors to students. Although the school was under construction when classes began, 15 and 16 year old students arrived opening day ready to take on the rigorous coursework that would earn them a college degree. In 1970, the school held its first graduation. Shortly afterward, the college became co-educational (Wechsler, 2001). In 1974, the college restructured the AA curriculum and eliminated the high school components. Gaining approval from the Commonwealth of Massachusetts, Simon's Rock obtained its new status as a four-year college. In 1979, Ms. Hall, who was concerned with the struggling college, turned to President Leon Botstein of Bard College for assistance. Dr. Botstein understood that young people could handle the rigors of college as he was a student of the University of Chicago at 16 years of age. In 1979, Simon's Rock became part of Bard College; however, it remains the only college offering a residential liberal arts college program to students after the tenth or eleventh grade (The Evolution of an Educational Innovation, 2006). With the joining of these two schools, the concept of combining high school and college arose.

Simon's Rock fostered the idea of high schools and colleges merging together. The next segment of history will introduce Dr. Janet Lieberman and her project known as the Middle College High School. The project is will be used as a guide in the development of the Early College High School Initiative.

Middle College High School

Several years after the start of Simon's Rock, the middle college high school (MCHS) initiative began the ground breaking effort of integrating grades 11 through 14. The purpose of the effort was to aid in the retention and education of underserved students (Lieberman 2004). Historically, underserved students are defined as low-income students, those who are first generation to attend college, and students of color (Green, 2006). The notion of high schools and colleges collaborating could reduce the attrition rate for students that were considered potential dropouts (Cullen & Moed, 1988). Hoffman and Vargas (2005) suggested "by changing the structure of the high school years and compressing the number of years to a college degree, Early College High Schools have the potential to improve graduation rates and better prepare students for entry into high skill careers". LaGuardia Community College President Joseph Shenker and Janet Lieberman, founders of MCHS at LaGuardia Community College, believed that the aspirations and abilities of students who might not otherwise attend college or who were at risk of dropping out of high school might increase. (Wechsler, 2001).

In 1971, Janet Lieberman, a psychology professor at LaGuardia Community College, was selected to design a program that would increase the college's enrollment and help with the dropout program within the New York City high schools. With a background in education and counseling, Dr. Lieberman understood the problems facing the disadvantage youth and why many chose to drop out of school. In outlining the program, Dr. Lieberman addressed three basic problems. The first problem was the large number of underachieving students who were dropping out of high school and lacked the adequate skills and life goals to maintain a sufficient quality of life. The second problem

was that many of the students who did graduate from high school did not have the skills to be successful within the university system which required remediation of the core university subjects. The third problem was that the students that did graduate from high school were not prepared to enter the workplace. Therefore, in her design Dr. Lieberman included a form of work or career internship. With financial backing from the Carnegie Mellon Foundation, Dr. Lieberman and cofounder Joseph Shenker, spent three years planning and attaining approval for this program that would target a dropout population that ranged between 16- and 20-year-olds (Carter, 2004; Kisker, 2006).

Dr. Lieberman's idea was based on the assumption of how to successfully educate underprivileged and at-risk students. To be successful in meeting this challenge, significant collaboration between secondary and post-secondary education was necessary. She felt that community colleges were best suited for this type of collaboration due to the governing structure and their spirit of community. In addition, because of their community involvement and workforce programs, the community colleges were well suited to participate in the educational interventions for at-risk students (Lieberman, 2004).

The core design of the Middle College High School located the school on the campus of a community college. High school students would attend their courses in various classrooms of the community college building and as the students excelled in high school classes, participate in college classes was permitted. One belief of the committee was that by bringing the students to the college campus every day the student would begin to see themselves as people who would succeed in college and in life. The committee also believed at-risk high school students who interact with college students

on a college campus would show improved discipline and work ethics in order to emulate the attitudes of the older students (Cullen & Moed, 1988). Another belief that added to the success of the design was the potential financial savings. The duplication of resources such as equipment cost and the building of new facilities would no longer exist as the resources would be shared by both high school and college employees (Lieberman, 2004).

The original philosophy of the middle college high school that was created by Dr. Lieberman and her committee is still used today. The values included in the middle college high school are as follows:

1. A part of the American ideal is for one to feel he or she has a future
2. Career exploration is integral to a successful education
3. Education should be applicable to both work and leisure
4. Ones quality of life is enhanced by the enjoyment of learning for the sake of learning
5. Close, continuous relationships with faculty, staff, and peers in a place of mutual learning helps students to develop a sense of self which produces competent and autonomous individuals with positive personal and social commitments
6. All instruction should be problem centered and interdisciplinary, and should cross subject area boundaries in order to be compatible with students' curiosity and interests
7. Instructors should rely on primary sources and multimedia techniques rather than texts in order to promote a spirit of inquiry.

Problems were encountered as the design was to be instituted. In the final stages of the initiative, state policies prevented one critical component from being included in the design. This component was based on the funding of high school and colleges. Because of the way the funding was divided among public high schools and community colleges it could not be combined and therefore the state funding for high students could not pay for their college. Colleges would not receive funds for high school students taking classes on their campus. Because of the funding issues it would be impossible to implement the middle school as planned. The first option was to obtain status as an alternative high school thereby receiving funds from the New York Board of Education based on the number of students enrolled (FTEs) and their average daily attendance (Wechsler, 2001). Lieberman felt this option would add reporting and staffing burdens which dampens creativity and reduces the school's ability to provide a flexible, individualized course of study for its students. Also with this option, the first two years of college grades 13 and 14 could be separately funded and overseen by the board of higher education. The second option was to be fully funded and supervised by the board of higher education but unfortunately, this was impossible as state law prohibited sending financial support for its secondary education to a college-level governing body. This was the end of Lieberman's vision to integrate high school and the community college.

Although the initiative never encompassed Lieberman's "full" vision of a middle college high school, in the end a new curriculum was created so that students were allowed more flexibility in their learning. The MCHS curriculum is not divided by grade levels, therefore it allows a student who needs more time to master a subject to remain with that subject while at the dame time to move ahead in other courses in which he/she

has shown competency (Kisker, 2006). The students no longer had to complete the standard high school testing for graduation but had to maintain a portfolio that was comprised of extensive classroom assessments derived from an enormous amount of reading and writing. This in turn prepared the student to enter into higher education classes without remedial coursework (Carter, 2004). In addition, a cooperative job education program was developed that included field trips to various employers and internships. Students were required to complete three full or part time cooperative education internships during their four years of high school including a community service internship (Cullen & Moed, 1988; Kisker, 2006). Finally, a counseling structure was put in place that promoted student-faculty relationships, cooperative learning, and student individuality.

The institution of the MCHS was deemed a success in New York when a 10-years study showed that 97 percent of the students stayed in school and 87 of those students graduated. It was also noted that 90 percent of the MCHS graduates went onto attend college (Lieberman 2004).

Learning from the design of the Middle College, the Early College High School Initiative retained the core purpose of that initiative; low income and students of color to have an opportunity to attend college as its foundation. From this foundation the program's purpose and its benefits were designed. The following section will focus on the design and the components in the creation of the initiative.

Early College Components

The typical Early College High School is an urban public school that exists on a college campus (Jobs for the Future, 2003). Early college was designed to provide the

underrepresented student a chance to attend college and to boost high school graduation rate by enticing students to stay in school. The purpose of the Early College High School Initiative is to target populations that did not have an avenue for higher education. This population includes low-income students, students of color, English as a second language learners, and first-generation college-goers. The thought behind the Early College movement is that rigor, not remediation, will help more students move on to college. The student's commitment is to embark upon the academic challenges provided by college-level courses in order to excel in high school and embrace higher learning. These students move from believing that there is no opportunity to achieve to entering an arena of high achievers.

Each Early College High School develops its unique vision and shares the following characteristics:

- Students have the opportunity to earn an Associate's degree or up to two years of transferable college credit while in high school.
- Mastery and competence are rewarded with enrollment in college-level courses and the opportunity to earn two years of college credit free.
- The years to a postsecondary degree are compressed.
- The middle grades are included in the school, or there is outreach to middle-grade students to promote academic preparation and awareness of the Early College High School option.
- Schools provide academic and social supports that help students succeed in a challenging course of study.

- Learning takes place in small learning environments that demand rigorous, high-quality work and provide extensive support.
- The physical transition between high school and college is eliminated—and with it the need to apply for college and for financial aid during the last year of high school.

Unique characteristics of Early College High Schools are that the classes are located on a two-year college campus and classroom sizes are smaller than the standard public high school. With a limit of 400 students admitted to Early College High Schools; there are approximately 60 to 100 students per grade level. The students that are accepted into the Early College High School will not only attend general high school classes but will earn college credit while attending classes with college students. Starting in 2002 the first Early College High School opened its doors and the growth of the Early College has been phenomenal. In the fall of 2010, there were over 200 Early College High Schools across the nation. North Carolina leads the country with 69 Early College High Schools. While Early College High Schools are typically on a college campus, other locations have been established in non-school buildings as well as distance education courses (American Institutes for Research, 2007). Students normally attend their high school classes in separate classrooms and then integrate with college students for their college courses.

College culture is an important factor to Early College High School students. As high school students interact with college students throughout their high school careers, the environment establishes high expectation for students and provides both structure and formal opportunities for students to view themselves as college material. This unique

feature creates an environment in which college becomes a natural part of the student's life. The early college representatives must remember that this a big step for the students. High academic expectations are also important components of the college going culture. Students who become accustomed to high expectations in high school are prepared for the demands of college. In addition to the high academic expectations, the Early College High Schools use a variety of strategies to promote students' academic identity. College materials include structured programs or activities along with college tours, participation in social or cultural events on the higher education campuses, and the advantage of role models to discuss college life. It is also important that Early College High Schools use some type of strategy to build college culture with the focus on expectations and on creating an image of students as college learners. The high school students need to be treated as college students to increase their self-image as a greater degree of responsibility comes with higher learning. In looking at the teaching style for the students, Rowan Early College Principal Cindy Misenheimer (2010) states, "we are trying to teach 21st century skills and collaborating with other people is very important to us." The lessons are problem/ project based with a lot of collaboration between students and faculty. It is not just teaching towards the exam as in many school systems. It is about how education relates to everyday life. It is an aggressive approach to learning. Liaison Carolyn Bayer (2010) adds that we must get these students away from the passive learning style that is experienced in middle school. Ms. Bayer explains her statement by saying, "Passive learning type style, if you are a good student and you are pleasant then you pretty much will get a good grade and get passed on most of the time and then they get here and having a charming personality is lovely but it is not enough – so we have to

take them from the 8th grade mentality and turn them into high school and college mentality simultaneously - academic ready - just because a student could pass a test to get into the class did not mean he was development ready to take the class" (Misenheimer, 2010).

As students are trying to enter into a world of high academics, it is vital to note that the students will need help with this change. The Early College High School is committed to the support of students, not only academics but emotionally. This commitment includes everyone associated with the Early College High School. In order to supply the necessary support for the students, the early college has set up guidelines known as the three Rs; rigor, relevance and relationships**.**

Examining the three Rs separately provides insight into the kind of instruction that characterizes high school and college classes throughout the Early College High School Initiative. Rowan Early College High School Principal Cindy Misenheimer spoke about the relevance of the three Rs in an overview of the Early College High School at Rowan-Cabarrus Community College. Principal Misenheimer orated that the first "R" represents rigor. The curriculum courses are taught as honor level courses. Misenheimer states, "The way to go is not in offering the remedial courses but in offering the acceleration courses". However, she cautions that in order to accelerate people to be in honor-level classes you must also offer the necessary support. Rigorous lessons require students to organize, interpret, evaluate, and synthesize information to solve problems and/or analyze text in a new way. Relevant is the second "R" in the guiding principles. This is where everything that is taught is relevant to the modern world and can be used throughout life. Students understand why the lesson is relevant for their surroundings.

Relevance goes hand-in-hand with rigor; in order to make rigorous lessons easier to understand they must be relevant. These two guidelines provide a connection to life experiences and to what the student may encounter in real-world situations. The third "R" is relationships. These relationships provide the support students need in order to complete their studies. Principal Misenheimer states, "We know our students' very well and they know us very well" (Misenheimer, 2010). She further explains that "innovated administrators do not spend their days executing discipline or stuck in the office, they are in the classrooms and the hallways. They are very involved with the students to the point where students should be able to ask the administrator to proof a paper for them or if they have a problem, they do not understand. Everyone associated with the Early College High School Initiative needs to be approachable" (Misenheimer, 2010).

It is the belief of this researcher that a fourth "R" should be added; Retention. One reason the initiative was developed was to retain students. The relationship with the students builds the support, which in turn improves retention of students. Principal Cindy Misenheimer states that changing the student's work ethic is not easy. "Many students enter into the Early College High School with a middle school work ethic. This means that for many, if the work is not completed and turned in on time, the teacher will get impatient, give the assignment a zero, and move on to the next assignment. The Early College High School student has to be trained that the work does not go away, it just keeps building up and accumulating. About six weeks into the program the student will have a melt down because the student procrastinated and the work did not go away. Because of the mounting assignments, it is difficult to determine where to begin in order

to catch up and the student becomes over whelmed. That is when everyone steps in to provide support" (Misenheimer, 2010).

Early College in North Carolina

The Early College High School Initiative resides within the New School's Project of North Carolina and is funded through the Bill and Melinda Gates foundation, the State, and through the county school system where it resides.

Starting in the fall of 2002, Guilford Community College was the first early college in North Carolina. In 2005, eleven colleges across the state of North Carolina had opened their doors to students who wanted to enter into this challenge (New Schools Project, 2009).

In fall 2009, North Carolina leads the Early College High School Initiative with 105 innovated high schools. Out of the 105 innovated high schools, 69 are Early College High Schools. More than 21,000 students from 77 of the state's 115 school districts are involved in North Carolina's New Schools Project (New Schools Project, 2009). North Carolina became involved with the program because the state can't afford dropouts. According to the New School's Project, 3 of every 10 ninth graders in North Carolina do not graduate in five years. This means that every day 131 students drop out (New Schools Project, 2009). The Alliance for Excellent Education reports that, "for just one year of dropouts from the class of 2009, North Carolina will fail to benefit from $12 billion in lost lifetime earnings from students who failed to graduate because of the number of high school dropouts and the closing of major factories North Carolina" (Alliance for Excellent Education, 2009).

In order to combat the drop out problem, in 2004, then Governor Mike Easley, kicked off the Learn and Earn Early College High School Initiative. According to Governor Easley, in a statement to the state board of education:

> *The initiative is designed to improve high schools, to better prepare students for college and career, to create a seamless curriculum between high school and college and to provide work-based experiences to students. Learn and Earn Early College High Schools will meet these goals by establishing autonomous high schools on the campuses of colleges or universities and providing students the opportunity to earn Associate's degrees or two years of transferable college credit while still in high school. In an era of dramatic economic change, Learn and Earn provides a high school experience that prepares students to meet the needs of a new economic reality.* (Leak, 2006)

The formation of the New Schools Project committee designed the characteristics of the initiative as follows (Leak, 2006):

1. Be an autonomous high school located on the campus of a college or university;
2. Provide students the opportunity to complete high school with a high school diploma and an Associate's degree or two years of transferable credit at no cost to the student;
3. Serve students in grades 9 through 12 or 13;
4. Create clear ties to the workplace, including a graduated series of work-based learning experiences for students;

5. Serve a student body that reflects the diversity of the district in terms of ethnicity, socioeconomic status, academic ability, achievement level, and motivation;
6. Design and implement affective and academic systems of support to help students attain the high expectations presented by the early college model;
7. Redesign the ninth and tenth grades to build high levels of academic readiness; and
8. Partner with middle schools to prepare rising high school freshmen for the early college experience.

The concept of high school students taking college courses in not new in North Carolina. With the Huskins Senate Bill 1549 that was passed July 1, 1998, high school students could earn college credit but the credit could not be used for core educational graduation requirements for high school (Hoffman & Vargas, 2005) . The Huskins Bill is similar to the Early College High School; however students must be in the classification of qualified students. In this arena, "the term qualified high school students is defined as students in grades nine through twelve who have achieved a level of academic and social maturity necessary to perform successfully in college credit courses and who have also been recommended by their principal for enrollment" (Beaufort County Community College , 2009). In comparison to the Huskins Bill, the Early College High School Initiative searches for the underrepresented student to attend the Early College High School. Both of these programs allow students to earn high school and college credit. However, the Huskins student must attend college classes away from their high schools

where as the Early College High School students attend college classes and high school classes on the same campus. A major problem that exists is in assigning credits to both Huskins and Early College students. The state of North Carolina requires students to take 11 high school courses that are associated with high school graduation and End of Grade (EOG) tests. The students still have to take the EOGs for North Carolina however; the schools may apply for a waiver from state regulations to allow students to take college courses in the subject areas and to take the EOGs without having taken the actual high school course.

Dr. Chambers' North Carolina Early College Survey

Although the Early College program is less than ten-years new in North Carolina, researchers are collecting data and studying the concepts of the program in order to evaluate its success. Dr. Jason Chambers completed a dissertation titled "*North Carolina Community College Presidents' and School Superintendents perception of the Early College* (2009)." This study looked at the purpose and benefits of the Early College High School in North Carolina utilizing the perceptions of High School Superintendents and College Presidents. Dr. Chambers' designed his survey around the elements of; purpose and benefits. To test his instrument for reliability, he formed a panel of experts from the Early College High School program and frequently discussed his items during their development among this panel of experts. The data gathered from Dr. Chamber's research along with the panel's recommendations, provided a basis for the 14 item survey that would be distributed among high school principals and college presidents. Dr. Chambers chose to use a combination of closed-ended and Likert Scale questions. The Likert Scale questions will have responses ranging from 1-4:

1. Strongly agree
2. Agree
3. Disagree
4. Strongly disagree

The survey consisted of fourteen questions. The first question was used to determine whether the participant was a community college president or a school superintendent. The second question determined the number of years their Early College has been in existence. Questions three through seven were created to gather information in regards to how community college presidents and school superintendents perceived the purpose of the Early College High School. Survey questions eight through fourteen were created to gather information in regards how community college presidents and high school superintendents perceived the individual institutional benefits of the Early College High School.

Prior to this distribution, Dr. Chambers tested for validity by piloting his survey among a group of six experts that worked in the same area as those who would be participants in the survey. This was done in order to provide an overview of responses, to ensure the questions were easy to understand, and to provide information on any possible problem that might occur.

Once the survey was approved by the panel of experts, Dr. Chambers mailed copies to college presidents and school superintendents associated with the thirty-eight North Carolina Early Colleges. The information sent contained as copy of the survey along with a self-addressed stamp envelope, and a cover letter explaining the intent of the survey. The participants were encouraged to complete the survey but Dr. Chambers stressed

that participation was strictly voluntary. The cover letter also stated that all information gathered would be kept confidential. The self-addressed, stamped envelopes were coded to identify individuals who did not complete a survey so that a follow-up survey could be sent within two weeks. Dr. Chambers set his response rate goal at 50%. Sixty-three surveys were mailed and collected during a ten week period. Forty-nine surveys were completed and returned for an overall response rate of 77%. Community college presidents returned 21 of 28 surveys for an individual response rate of 75%. Superintendents returned 28 of 35 surveys for an individual response rate of 80%. Over the course of the ten weeks Dr. Chambers collect the responses but did not open the responses until it was determined no further responses would be received. Once it was determined that there would be no further responses, the envelopes were opened and the results tallied.

Dr. Chambers used a t-test to compare the interval data generated by the differing responses of community college presidents and high school superintendents. The significance level was set at .05. For results greater than the .05 level, the null hypothesis would be met. An unequal N existed because there were more responses from school superintendents than from community college presidents

The results showed that there were no significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College increases access to college for students from low-income families. There were no significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College reduces the high school drop-out rate. There were no significant differences in the perceptions between community college presidents and high school superintendents about which group of

students benefit the most from the Early College. There were significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College prepares students for success in higher education. Community college presidents believed more strongly that the Early College prepares students for success in higher education. There were no significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College improves high school graduation rates. no significant differences in the perceptions between presidents and superintendents about whether the Early College provides an optional high school for students not interested in the traditional high school experience. There were no significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College increases community college enrollment. There were no significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College improves college retention rates. There were no significant differences in the perceptions between community college presidents and high school superintendents about which institution, the high school or community college, benefits the most from the Early College. There were significant differences in the perceptions between community college presidents and high school superintendents about whether the Early College reduces overcrowding in the high schools. The superintendents believed more strongly that the Early College does not reduce overcrowding in the high schools. null hypothesis was rejected for two survey questions that addressed perceptions regarding the ability of the Early College to prepare students for success in higher education and reduce high school overcrowding. The rejection of the null

hypothesis indicated significant differences in the responses among community college presidents and high school superintendents in these areas.

The null hypothesis was met for Dr. Chambers' remaining 10 survey questions indicating that there were no significant differences in the responses among community college presidents and high school superintendents for these questions.

The null hypothesis was accepted in six out of seven survey questions related to the individual institutional benefits of the Early College. Evidence from the survey indicated not only do community college presidents and high school superintendents understand the benefits of the Early College at their own institutions, they also understand the partnering institutions' benefits. The broad rejection of the null hypothesis is a result of the existence of consistent communication and effective cooperation between the partnering institutions.

Community college presidents and high school superintendents agreed that community colleges benefit from an Early College by increased enrollments and improved retention rates, and that high schools benefit by improved graduation rates and the existence of an optional school for high school students not interested in the traditional high school experience. Evidence did not suggest total agreement on all survey questions regarding institutional benefits. The null hypothesis was rejected for two survey questions, the ability of Early College to reduce overcrowding in the high school(s) and the ability for Early to reduce the need for remedial classes at the community college level. The differences in responses can be attributed to the fact that Early Colleges in North Carolina must apply for a special waiver that allows their students to enroll in remedial courses.

Summary

Chapter 2 provided a review of the literature associated with the theoretical framework for this study. The areas covered provided information on the purpose of the Early College High School that included, reducing the high dropout rate, enhancing our nation's economy, and by providing students of color and youth from low-income neighborhoods with the high-quality education needed to succeed in college and in the modern workplace. The chapter also provided a background investigation of the Early College High School, which included the elements that made the Early College High School a viable solution for high school dropouts. This section discussed the benefits of the Early College High School including the opportunity to earn a high school diploma and an associate's degree in 4-years, a strong academic background to prepare students for college course with no remedial classes, and aid in reducing the state budget by sharing resources.

The third section explored North Carolina's efforts to decrease high school dropouts and the implementation of the Early College High School Initiative known as the New Schools Project. This section covered several ways North Carolina attempted to combat the dropout problem including the Early College High School Initiative, the Huskins Program, and the Learn and Earn Program.

The chapter concluded with a review of the survey instrument created by Dr. Jason Chambers to assess perceptions of the purpose and benefits of the Early College High School Initiative between the high school and college administrators.

Chapter 3 will describe the research design and methodology that will be used in this study to gather data and how that data will be analyzed and used within this study.

CHAPTER 3: METHODS

The objective of this chapter is to provide a description and justification for the quantitative research design selected for this study. Details will include a description of the research design; participant overview; development, description, and validity of the instrumentation; methods for data collection and analysis. This study employed a quantitative methodology using an author designed survey instrument.

At the end of the 2009-2010 school year, there were 70 Early College High School located across the state of North Carolina (Lewin T. , 2010). This study was based on 69 schools, as the last Early College High School was added after the research data had already been obtained.

Purpose

The Early College High School Initiative has grown throughout the country; however, North Carolina has seen the most rapid growth with 70 Early College High Schools (Public Schools of North Carolina, 2010). This number represents one-third of the 210 Early College High Schools nationwide. In order to sustain the intention and foundation of the purpose and benefits of the initiative, it is important to gather data from all people who are a part of the project. Therefore, the purpose of this study was to explore the perceptions of college instructors and high school teachers regarding the Early College program in North Carolina.

The research questions for this study focus on the design of the Early College High School, specifically the purpose and benefits. The following research questions will encompass these factors and guide this study:

1. What are the perceptions of college instructors regarding the purpose of the Early College High School Initiative in North Carolina?
2. What are the perceptions of high school teachers regarding the purpose of the Early College High School in North Carolina?
3. What are the perceptions of college instructors regarding the educational benefits of the Early College High School in North Carolina?
4. What are the perceptions of high school teachers regarding the educational benefits of the Early College High School in North Carolina?
5. Are there significant differences in the perceptions of college Instructors and high school teachers regarding the purpose and benefits of the Early College High School in North Carolina?
6. Are there significant differences in the perceptions of college instructors and high school teachers regarding the purpose and the benefits of the Early College in North Carolina from schools that have held graduations and those who have not had a graduating class?
7. Are there significant differences in the perceptions of college instructors and high school teachers within the three regions of North Carolina (Mountain, Coastal Plains, and Piedmont) regarding the purpose and the benefits of the Early College in North Carolina?

Participants

The participants in this study were high school and college instructors who taught high school students in the Early College High School program in North Carolina. As it would be difficult to ascertain a complete listing of all instructors teaching within the Early College High Schools, (as instructors are continually changing positions or jobs) College Liaisons were located and requested to act as a go-between due to the mature of the liaison's job description. The liaisons appear to be the best method of contact as a college liaison is a college faculty member or an administrator who has access to the president and the respect of the faculty. The liaison also promotes the school's concept, commands resources, and facilitates support and collaboration (Lieberman 2004). To find out who the college liaisons were, a listing of all of the 69 Early College High Schools was located on the North Carolina New Schools Project web page. The webpage provided the school's name and for some schools had a web address attached. However, since limited information was provided about the schools, research was completed for each school to obtain all current information. Once the school was located, staff and faculty information was examined to locate each liaison and their contact information. When a liaison's information was unobtainable or the position was vacant, school personnel were contacted, via telephone, to ascertain the necessary information. Some schools that did not have liaisons and provided contact information for the principal of the Early College High School. To keep track of this information, an excel spreadsheet was created that listed school name, college with whom the high school was partnered, year it was opened, liaison's name, phone number, email address, principal's name, and principal's contact information. Once the spreadsheet was created, all 69 Early College

High Schools in North Carolina were invited to participate in this study. On May 10, 2010, an initial contact email was sent to each college liaison or the principals explaining the study. As each liaison or principal responded to the initial email, a follow-up email was sent with an instructional attachment to be given to the instructors. For those schools who did not respond within a seven day period, a follow-up email was sent. If there was no response to the second e-mail, a phone call was made to the liaisons. Of the 69 schools 58 liaisons were contacted. The difference in number of schools and liaisons were that some colleges are partnered with two or three high schools in their area. Hence, one liaison would cover more than one Early College. Out of the 58 individual that were contacted, 38 or 65% responded to the initial email. Out of the 38 responses, 32 or 55% of the schools had participants who actively participated in the study.

Within this attachment information of the study was outlined as were the instructions of how to access the web-based survey. As this was a secure web-based survey, which required a password, the password was also addressed in the instructions. Of the 69 Early College High Schools, 38 responded. Of the 38 Early College High Schools that responded, 32 of the schools had Early College High School instructors to actively participate in the study. This equates to 46% participation. Of the schools participating, a total of 132 Early College High School Instructors completed the survey. Of the 132 people, 35 were High School teachers and 97 were College instructors.

Instrument

The instrument that was used to gather data was a web based survey which this researcher created from a survey created by Dr. Jason Chambers in 2009. Dr. Chambers created this instrument in order to gather data for his dissertation. As Dr. Chambers

dissertation, North Carolina Community College Presidents' and School Superintendents' Perception of the Early College Program and my dissertation was seeking similar information the instrument was a good fit. Dr. Chambers created his survey with from information obtained in his literature review and with guidance from Early College officials in North Carolina. He created his survey using a combination of closed-end questions and Likert Scale questions. The Likert Scale questions utilized the 1-4 response method. The participant could choose one response; (1) Strongly Agree, (2) Agree, (3) Disagree, and (4) Strongly Disagree. Dr. Chambers' survey contained 14 questions, the first two questions in his survey determine whether the participant was a college president or a school superintendent and the number of years the Early College High School had been open. These two questions remained in my survey with the words "college presidents and school superintendent" changed to college instructor and high school teacher". Two additional demographic questions were added to determine region and partner institution. Dr. Chambers included 5 questions to address perceptions of the purpose of the Early College High School and 7 questions to address the benefits of the Early College High School. These questions were kept in my survey with no changes. To test his instrument for reliability, Dr. Chambers formed a panel of experts from the Early College High School program and frequently discussed his questions during their development among a panel of experts. Dr. Chambers measured face validity by asking the panel of experts to review his questions and asked the panel to comment on the validity of the items. All 5 members of the panel provided feedback. Dr. Chambers revised the items based on the input from the panel and he determined some evidence of face validity. To further prove reliability and validity, of Dr. Chamber's survey, a Cronbach's alpha test was run on

Dr. Chamber's raw data to determine the internal consistency of the instrument. Item's 8 and 15 we removed from the test as the data was not measured using the Likert scale. The results revealed a .902 alpha which indicated acceptable reliability. A second test was run also using the raw data utilizing a Pearson's correlation which totaled .91. This too constitutes a high measure of reliability.

Data Collection

Participants were invited to participate in the study by instructions that were emailed to their college liaisons (Appendix A). The instructions included a direct link to the online survey and a password. The instructions also outlined that: (1) The survey was being conducted in partial fulfillment of the requirements for a doctoral dissertation at UNC Charlotte and the name of the researcher; (2) the purpose of the survey; (3) participation is voluntary; (4) survey responses are anonymous and confidential; and (5) results will be reported in aggregate using unidentifiable information. The survey was created with the Survey Share program and was activated on May 10, 2010. The survey remained open until June 30, 2010. The first page of the survey asked participants to read the consent form which was located on the same page. The participants were again apprised of the reason for the research and that their participation was strictly voluntary. It furthered mentioned the number of questions and the approximate time it would take to complete the survey. Contact information for the compliance office at UNC-Charlotte and for the researcher was provided to participants if any concerns about the study arose. In bold red letters at the bottom of the consent form is stated: **"**If you are a High School or College instructor teaching within the Early College High School Program in N.C., understand the statements above, and freely consent to participate in the study, enter the

password which was listed in your instruction letter given to you via your liaison, to begin the survey". The password served two purposes. The first purpose was to add a layer of security to the survey and the second purpose was to have a record of the participant's consent.

Data Analysis

The statistical program, SPSS, was used to analyze the aggregate data that was downloaded from the survey share program. In order to answer the research questions several tests were invoked. These tests included Chi-Square, ANOVA, T-tests, and tests for descriptive statistics.

Chi-square test of goodness of fit was used to assess whether instructors of high school and colleges were in 1:1 ratio and whether those from mountain, coastal plains and Piedmont in the ratio 1:1:1. Comparison of responses of high school and college instructors was carried out using chi-square test of association in contingency table of cross tabulation of instructor type with the response to the question. When size of the sample is reasonably large, chi-square test is the statistical tool of choice and the test is valid if not more than 20% of the expected frequencies (row total × column total / grand total) of the contingency table are less than 5 and none is less than 1. When this requirement is not met, it is customary to pool the frequencies of nearby categories. The chi-square statistic is defined by, $\chi^2 = \sum \frac{(\text{Observed frequency - expected frequency})^2}{\text{Expected frequency}}$, follows chi-square distribution with degrees of freedom equaling number of classes – 1 in goodness of fit and (no. of rows –1) × (no. of columns –1) in contingency tables. If the probability of obtaining observed chi-square is less than the usual level of statistical significance of 5%, we reject the null hypothesis. Chi-square distribution is a continuous

distribution and Yates' correction for continuity is usually applied for estimates of chi-square from 2×2 contingency table.

Cronbach's alpha, a combined measure of the intercorrelation of responses to questions, was used to assess whether the questions measure an underlying construct (Cronbach's alpha > 0.7 suggest a one dimensional underlying construct) so that responses to questions on purpose and benefit perception of ECHS can be used to derive a composite measure of purpose and benefit perceptions. The Reponses to constituent questions were summed up to obtain the composite measure.

Normality is one of the assumptions to make t-tests, associated F-test and analysis of variance (ANOVA) valid and the normality of the derived composite score was assessed using Kolmogorov-Smirnov test. The test is based on the maximum difference between the observed distribution and the expected normal distribution. Normality of the distribution was also assessed graphically by superimposing normal curve on the histogram of the composite measure. For comparison of the measure between high school and college instructors, t-test (with prior checking of equality of variance and modification of degrees of freedom when equality assumption is not met) is employed and for comparison among college and school instructors of the three geographic region simultaneously, two-way ANOVA (with Bonferroni method for multiple comparison, in case of significant ANOVA result. ANOVA just tells whether all the subgroup have equal population mean or not and to identify the means that are different, one does post hoc analysis, with some correction for multiple testing) was employed. Box plot was used to have a visual assessment of the assumptions of ANOVA. Box plot is the most compact and informative method to depict a distribution and can be used to visualize several

distributions simultaneously in a very compact form. The lower end of the box aligns with first quartiles (25% of the data will be below the point) and upper end aligns with the third quartile (75% of the data below will be the third quartile) and middle line in the box shows the median. The lower 'whisker' extends to the smallest observation if it is within 1.5 times interquartile range (Q3-Q1) and upper whisker extends the maximum value, again if it is within 1.5 times interquartile range. The points, if any beyond the 1.5 times interquartile range, are depicted separately as 'extreme' values or 'outliers'. The symmetry and lack of it of the distribution can be made out the plot. A median at exactly at the middle of the box and similar whiskers on either end of the box suggests a symmetric distribution. Longer whisker at lower end suggests negatively skewed distribution and longer whisker at top end suggests positively skewed distribution.

Summary

Chapter 3 contained a description of the research design; participant overview; development, description, and validity of the instrumentation; methods for data collection and analysis. The chapter guides us to Chapter 4 where the analysis and results will be revealed. Following Chapter 4; Results, and Chapter 5; Conclusions and Recommendations, will end the study with discussion of the results of the study and recommendations for future studies. This study explored the perceptions of college instructors and high school teachers regarding the Early College program in North Carolina, specifically as related to the purpose and benefits.

CHAPTER 4: RESULTS

The purpose of this study was to explore the perceptions of college instructors and high school teachers working in an Early College High School environment in North Carolina on the purpose and benefits of the Early College High School Initiative. In this chapter the analysis of the data and its results will be reviewed

To ascertain this information, seven research questions guided this study.

1. What are the perceptions of college instructors regarding the purpose of the Early College High School Initiative in North Carolina?
2. What are the perceptions of high school teachers regarding the purpose of the Early College High School Initiative in North Carolina?
3. What are the perceptions of college instructors regarding the educational benefits of the Early College High School Initiative in North Carolina?
4. What are the perceptions of high school teachers regarding the educational benefits of the Early College High School Initiative in North Carolina?
5. Are there significant differences in the perceptions of college Instructors and high school teachers regarding the purpose and benefits of the Early College High School Initiative in North Carolina?
6. Are there significant differences in the perceptions of college instructors and high school teachers regarding the purpose and the benefits of the Early College High School Initiative in North Carolina from schools that have held graduations and those who have not had a graduating class?

7. Are there significant differences in the perceptions of college instructors and high school teachers within the three regions of North Carolina (Mountain, Coastal Plains, and Piedmont) regarding the purpose and the benefits of the Early College High School Initiative in North Carolina?

Participants

The participants in this study were high school and college instructors who have taught high school students in the Early College High School program located the state of North Carolina. As it would be difficult to ascertain all of the names and contact information for these participants, the Early College High School Liaisons were contacted to assist in reaching all of the eligible instructors. During the initial Internet research the 69 Early College High Schools in North Carolina, only the names and websites of the schools were provided on the New Schools Project web page. This researcher examined each school's website to ascertain the college liaison and their contact information. When a liaison's information was unobtainable or the position was vacant, the principal of the Early College High School was contacted. Because of this method, all 69 Early College High Schools in North Carolina were invited to participate in this study. An initial contact email was sent to the Early College Liaisons or the principals explaining my study. A follow-up email was sent with an instructional attachment that was to be given to the instructors. Within this attachment information of the study was outlined as were the instructions of how to access the web-based survey. As this was a secure web-based survey, which required a password, the password was also addressed in the instructions. Of the 69 Early College High Schools, 38 responded. Of those 38 that responded 32 colleges had instructors actively participate in the study

which equates to 46% participation. Of the schools participating, a total of 132 Early College High School Instructors completed the survey. Of the 132 people, 35 were High School teachers and 97 were College instructors.

A total of 132 subjects participated in the online survey that included 35 (26.5%) high school instructors (HSI) and 97 (73.5%) college instructors (CI). A Chi-square goodness of fit test indicated that the observed frequencies of HSI and CI did deviate from the expected equal frequencies at the .05 level, indicating that the sample was over represented by CIs [χ^2 (1, N =132) = 29.1, $p < 0.001$]. Thirty-two participants (24.2%) were from Mountain geographic region, 33 (25.0%) from coastal plain and 67 (50.8%) from Piedmont. The departure of the proportions from 1:1:1 ratio is statistically significant, χ^2 (2, N =132) = 18.0, $p < 0.001$. The proportion of HSI and CI who participated in the survey from the three geographic regions is depicted in Table 1. A Chi-square test of association suggested that the variation in the percentages of HSI and CI in the three geographic regions are well within the limits of sampling fluctuations or chance variations at an alpha level of 5% [χ^2 (2, N =132) = 4.7, $p = .096$].

Table 1

Percentages of High school instructors and College instructors who participated in the survey from the three geographic regions.

Geographic region	High school instructor		College instructor		Total	
	No.	%[a]	No.	%[a]	No.	%[b]
Mountain	10	(31.3%)	22	(68.8%)	32	(24.2%)
Coastal plain	04	(12.1%)	29	(87.9%)	33	(25.0%)
Piedmont	21	(31.3%)	46	(68.7%)	67	(50.8%)
Total	35	(26.5%)	97	(73.5%)	132	(100%)

[a] Percentage of the row total.
[b] Percentage of the grand total.

Results

This section will include the perceptions of the high school teachers and college instructors in regard to the purpose and benefits for the Early College High School Initiative in North Carolina. The results of the analysis will be presented in table format and include a discussion for each research question. Descriptive statistics will be presented for the four individual survey items followed by a description of inferential statistics on the perceptions of the purpose and benefits of Early College High School. This will be done throughout the discussion of the analysis section.

Survey Item Analysis

The survey items analysis has been grouped according to their correlation to the purpose and benefits of ECHS. The results of the analysis and the accompanying discussion will be presented for each group of research questions. Descriptive statistics will be presented follow each individual survey item, followed by a description of inferential statistics on the perception of the purpose and benefits of ECHS.

Research Question 1 and 2: Perceptions of High School Teachers and College Instructors Regarding the Purpose of Early College High School.

Research questions 1 and 2 were addressed through survey questions 5-8. This portion presents a discussion on the results that were found in reference to the perception of high school teachers and college instructors regarding the purpose of the Early College High School in North Carolina. Descriptive statistics will be presented for the four individual survey items (questions 5 - 8) followed by a description of inferential statistics on the perception of the purpose of ECHS.

Survey item 5: Early College High School (ECHS) will increase access to college for students from low-income families: Perception of HSI and CI.

This question was developed in response to Michael Wotorson's statement, "The one consistency in our education system is in our high schools that fail to provide students of color and youth from low-income neighborhoods with the high-quality education they need to succeed in college and in the modern workplace" (Committee on Education and Labor, 2009). This is also one of the corner stones for developing the Early College *(New Schools Project, 2009)*.

Majority of the HSIs (24, 68.6%) strongly agreed that ECHS would increase access to college for students from low-income families and 10 HSIs (28.6%) agreed with the opinion. Disagreement came from just 1 out of total 35 HSIs participated in the survey. Among 97 CIs, the proportions of participants who strongly disagreed, disagreed, agreed and strongly agreed with the opinion that ECHS would increase access to college for students from low-income families were 2.1%, 8.2%, 64.9% and 24.7%, respectively. Thus the perception appears to be different among HSIs and CIS (Table 2). To have a formal comparison of perceptions of HSIs and CIs, a chi-square test was carried out (to check whether the proportion of HSIs and CIs who agreed and strongly agreed with the opinion are similar) after pooling the first three groups (strongly disagree, disagree and agree) together in order to satisfy the assumptions to make the large sample chi-square test valid. The pooling makes 84 participants in the 'agree' group with 11 HSIs and 73 CIs, the percentages being 31.4% and 75.3% in the two instructor group, respectively. The chi-square test indicated that the perception were different among HSIs and CIs [χ^2 (1, N =132) = 19.5, $p < .001$].

Table 2

Early College High School (ECHS) Will Increase Access to College for Students from Low-Income Families: Perceptions of HSI and CI

ECHS will increase access to college for students from low-income families	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	2	(2.1%)	2	(1.5%)
Disagree	1	(2.9%)	8	(8.2%)	9	(6.8%)
Agree	10	(28.6%)	63	(64.9%)	73	(55.3%)
Strongly Agree	24	(68.6%)	24	(24.7%)	48	(36.4%)
Total	35	(100%)	97	(100%)	132	(100%)

All percentages are with respect to the column total.

Survey item 6: ECHS will reduce high school dropout rate: Perception of HSI and CI.

Question 6 refers to the large number of high school dropouts in our educational system. The IS Department of Education reported in 2007 that 6.2 million students had dropped out of high school (National Center for Educational Statistics, 2010). Perceptions differ – EC was effective in reducing the dropout rate (91.4%:78.1%) whereas CI had a higher disagreement rate (8.6%: 29.8%). Recent statistics (2/2010) showed that within the Early College Program there was a 92% graduation rate in 2009 (Lewin T. , 2010).

Total sample available for the analysis was 129 as three CIs skipped the question whether ECHS would reduce high school dropout. More than 90% of the HSIs either agreed or strongly agreed (16, 45.7% HSIs in each category) that ECHS would reduce high school dropout rate and three HSIs disagreed. Unlike HSIs where the disagreement was 8.6%, a substantial proportion (30, 31.9%) of CIs expressed their disagreement. Fifty (53.2%) CIs expressed their agreement and 14 (14.9%) agreed strongly with the opinion (Table 3). Formal comparison of perceptions of HSIs and CIs was carried out using chi-

square test after pooling strong disagreement & disagreement together. The chi-square test, to check whether the proportion who disagreed, agreed and strongly agreed with the opinion are similar among HSIs and CIs, indicated that the perception is different among HSIs and CIs [χ^2 (2, N =129) = 16.1, p < .001].

Table 3

ECHS will Reduce High School Dropout Rate: Perceptions of HSI and CI

ECHS will reduce high school dropout rate	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	2	(2.1%)	2	(1.5%)
Disagree	3	(8.6%)	28	(29.8%)	31	(23.5%)
Agree	16	(45.7%)	50	(53.2%)	66	(50%)
Strongly Agree	16	(45.7%)	14	(14.9%)	30	(23.3%)
Total	35	(100%)	94	(100%)	129	(100%)

All percentages are with respect to the column total.

Survey item 7: ECHS will prepare students for success in higher education: Perception of HSI and CI.

Challenge not remediation is a core principal of the Early College. To help with remediation the Early College Program follows the 3Rs; Rigor (acceleration not remediation), Relevance (where all materials taught have meaning), and Relationships (support to provide encouragement). These factors help prepare students for college success. One HSI (2.9%) and seven (7.2%) CIs either disagreed or strongly disagreed with the opinion that ECHS will prepare students for success in higher education. While 13 (37.1%) HSIs agreed with the opinion and 21 (60%) strongly agreed, the corresponding figures among CIs were 59 (60.8%) and 31 (32%), respectively (Table 4).

Formal statistical comparison of perceptions of HSIs and CIs in this regard was carried out using chi-square test after pooling those who strongly disagreed, disagreed &

agreed together. The pooling makes 14 HSIs (40%) and 66 CIs (68%) in the agreement group. Chi-square test, to check whether the proportion who agreed and strongly agreed with the opinion are similar among HSIs and CIs, indicated that the perception is different among HSIs and CIs [χ^2 (1, N =132) = 7.3, p = .007].

Table 4

ECHS will Prepare Students for Success in Higher Education: Perceptions of HSI and CI

ECHS will prepare students for success in higher education	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	2	(2.1%)	2	(1.5%)
Disagree	1	(2.9%)	5	(5.2%)	6	(4.5%)
Agree	13	(37.1%)	59	(60.8%)	72	(54.5%)
Strongly Agree	21	(60%)	31	(32%)	52	(39.4%)
Total	35	(100%)	97	(100%)	132	(100%)

All Percentages are with respect to the column total.

Survey item 8: ECHS will incorporate job skills into the curriculum: Perception of HSI and CI.

This question is referencing the incorporation of skill sets for employment. Newer jobs require higher skill sets. Dr. Audrey Thesis stated that currently the United States in the only highly developed democracy where young adults are less likely to have completed high school than the previous generation. She further stated that almost twice as many jobs over the next decade will require a postsecondary credential or college degree. Presently the U.S. is not producing enough qualified people to fill current and future jobs. Many of the Early College High Schools incorporate a cooperative job education program that includes field trips to various employers and internships. Students were required to complete three full or part time cooperative education internships during their four years of high school including a community service internship.

One respondent (#124) with a code of '10' for response to the question was not considered for the analysis and another six CI did not respond to the question, making the sample available for the analysis to 125. Majority of HSIs (74.3%) and CIs (65.6%) agreed that ECHS would incorporate job skills into the curriculum and the proportion who agreed strongly were 22.9% and 9.4%, respectively. Unlike HSIs where the overall disagreement was 2.9%, the proportion was 20.0% among CIs (Table 5). Formal statistical comparison of perceptions of HSIs and CIs regarding incorporation of job skills in to the curriculum was carried out using chi-square test after pooling strong disagreement & disagreement together. The chi-square test, to check whether the proportion that disagreed, agreed and strongly agreed with the opinion are similar among HSIs and CIs, indicated that the perception is different among HSIs and CIs at 5% level of significance [χ^2 (2, N =125) = 8.0, p = .018].

Table 5

ECHS will Incorporate Job Skills into the Curriculum: Perceptions of HSI and CI

ECHS will incorporate job skills into the curriculum	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	1	(1.1%)	1	(0.8%)
Disagree	1	(2.9%)	17	(18.9%)	18	(13.6%)
Agree	26	(74.3%)	63	(70%)	89	(67.4%)
Strongly Agree	8	(22.9%)	9	(10%)	17	(13.6%)
Total	35	(100%)	90	(100%)	125	(100%)

All percentages are with respect to the column total.

Research Questions 3 and 4: Perception of the Educational Benefits of ECHS

This portion will present discussion on the results that were found about the perception of high school teachers and college instructors regarding the benefits of the Early College High School in North Carolina. Descriptive statistics will be presented for the four individual survey items followed by a description of inferential statistics on the perception of the purpose of ECHS.

Survey item 9: Type of students that will benefit the most from the ECHS: Perceptions of HSI and CI.

Several programs have been created to help students earn college credit. The International Baccalaureate, Learn and Earn Online, and the Huskin's program are only a few of the choices for students. The aforementioned programs are based on high academics or students with a higher grade point average. The Early College is different as it targets the underrepresented student and first time college goer. Since Early College is in its infancy many instructors so not know that it was developed for a specific target population. The data showed that about 2/3rd of HSIs were of the opinion that both gifted as well as low performing students would benefit from ECHS.

The proportion who opined that only low performing would benefit was 25.7% and only gifted would benefit was 8.6%. The corresponding proportions among CIs were 49.5%, 6.3% and 42.1%, respectively (Table 6). Another two opined that neither gifted nor low performing students would benefit. Chi-square test was carried for comparing proportion of HSIs and CIs who opined that students that benefit most by ECHS would be low performing, high performing and both, after ignoring two CIs who opined that

neither group would be benefited. The test suggested that the proportions are not similar among HSIs and CIs [χ^2 (2, N =128) = 18.1, $p < .001$].

Table 6

Type of Students that will Benefit the Most from the ECHS: Perceptions of HSI and CI

Type of students that will benefit the most from the ECHS	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Low performing, at-risk students	9	(25.7%)	6	(6.3%)	15	(11.4%)
High performing, gifted students	3	(8.6%)	40	(42.1%)	43	(32.6%)
Both groups will benefit equally	23	(65.7%)	47	(49.5%)	70	(53.0%)
Neither group will benefit	0	(0%)	2	(2.1%)	2	(1.5%)
Total	35	(100%)	95	(100%)	130	(100%)

All Percentages are with respect to the column total.

Survey item 10: ECHS will benefit the partnering high school(s) by reducing overcrowding: Perception of HSIs and CIs.

Students who attend the Early College High School are no longer attending their local high school but are going to high school and college on a college campus. Moving students from high school to college campuses does not relieve the high schools of overcrowding and does cause the college to supply classroom space and cafeteria space to the high school students.

Colleges also have to add additional classes to their curriculum to accommodate the additional students. The data shows that three CIs skipped the question whether ECHS will benefit the partnering high school(s) by reducing overcrowding and of the remaining 129 respondents; about 60% of both HSIs and CIs agreed that ECHS would benefit the partnering high school(s) by reducing overcrowding (Table 7). The proportion who agreed strongly on this was comparatively higher among HSIs (14.3%) compared to CIs (3.2%).

Strong disagreement group was pooled with disagreement and agreement group was pooled with strong agreement for doing chi-square test. After the pooling, the proportion who disagreed with the notion that ECHS would benefit the partnering high school(s) by reducing overcrowding was 25.7% (9/35) among HSIs and 36.2% (34/94) among CIs and those who agreed, 74.3% and 63.8%, respectively. The test indicated that the proportions are well within the limits of chance variation or the difference in proportions is not statistically significant [χ^2 (1, N =129) = 0.8, p = .363].

Table 7

ECHS Will Benefit the Partnering High School(s) by Reducing Overcrowding: Perceptions of HSIs and CIs

ECHS will benefit the partnering high school(s) by reducing overcrowding	High school instructor No. %	College instructor No. %	Total No. %
Strongly Disagree	2 (5.7%)	3 (3.2%)	5 (3.8%)
Disagree	7 (20%)	31 (33%)	38 (28.8%)
Agree	21 (60%)	57 (60.6%)	78 (59.1%)
Strongly Agree	5 (14.3%)	3 (3.2%)	8 (6.2%)
Total	35 (100%)	94 (100%)	129 (100%)

All Percentages are with respect to the column total.

Survey item 11: ECHS will benefit the partnering high school(s) improving graduation rates: Perceptions of HSIs and CIs.

This question had little research associated with it as the Early College High School is less than ten years old and only few colleges have had graduations. However a recent report (02/2010) stated that in 2009 there was a 92% graduation rate from the Early College High Schools in North Carolina. The data showed that one HSI and seven CIs skipped the question on whether ECHS would benefit the partnering high schools by improving graduation rates. Of the remaining 34 HSIs, 64.7% agreed with the statement

and 29.4% agreed strongly making overall agreement about 94%. Among 90 CIs who expressed their opinion on the question, the percentage who disagreed, agreed and strongly agreed were 35.6%, 51.1% and 12.2%, respectively (Table 8). Strong disagreement and disagreement was pooled together. The test indicated that the proportion of HSIs and CIs who expressed different degree of agreement with the statement was not similar [χ^2 (2, N =124) = 13.4, p =.001].

Table 8

ECHS Will Benefit the Partnering High School(s) by Improving Graduation Rates: Perception of HSIs and CIs

ECHS will benefit partnering high schools by improving graduation rates	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	1	(1.1%)	1	(0.8%)
Disagree	2	(5.9%)	32	(35.6%)	34	(25.8%)
Agree	22	(64.7%)	46	(51.1%)	68	(51.5%)
Strongly Agree	10	(29.4%)	11	(12.2%)	21	(16.9%)
Total	34	(100%)	90	(100%)	124	(100%)

All percentages are with respect to the column total.

Survey item 12: ECHS will benefit the partnering high school(s) by providing an optional school for students not interested in the traditional high school experience.

One CI skipped the question on whether ECHS would benefit the partnering high schools by providing an optional school for students not interested in the traditional high school experience. Of 35 HSIs, 42.9% agreed with the statement and 54.3% agreed strongly making overall agreement about 97%. Among 96 CIs who expressed their opinion on the question, the percentage who strongly disagreed, disagreed, agreed and strongly agreed were 3.1%, 8.3%, 61.4% and 28.1%, respectively (Table 9). Strong disagreement and disagreement was pooled together for making the chi-square test valid.

The test indicated that the proportion of HSIs and CIs who expressed different degree of agreement with the statement was not similar [χ^2 (2, N =131) = 8.5, p =.014].

Table 9

ECHS Will Benefit the Partnering High School(s) by Providing an Optional School for Students Not Interested in the Traditional High School Experience: Perceptions of HSIs and CIs

ECHS will benefit partnering high schools by providing an optional school for students not interested in the traditional high school experience	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	0	(0%)	3	(3.1%)	3	(2.3%)
Disagree	1	(2.9%)	8	(8.3%)	9	(6.8%)
Agree	15	(42.9%)	58	(60.4%)	73	(55.3%)
Strongly Agree	19	(54.3%)	27	(28.1%)	46	(35.1%)
Total	35	(100%)	96	(100%)	131	(100%)

All percentages are with respect to the column total.

Survey item 13: ECHS will benefit the partnering high school(s) by increasing enrollment: Perceptions of HSIs and CIs.

One CI skipped the question on whether ECHS would benefit the partnering high schools by increasing enrollment and non-valid entry of '10' was there for one of he respondent (#6). Of 35 HSIs, 44.6% agreed with the statement and 40.0% agreed strongly making overall agreement about 89%. Among 95 CIs who expressed their opinion on the question, the percentage who strongly disagreed, disagreed, agreed and strongly agreed were 2.1%, 11.6%, 64.2% and 22.1%, respectively (Table 10). Strong disagreement and disagreement was pooled together for making the chi-square test valid. The test indicated that the proportion of HSIs and CIs who expressed different degree of agreement with the

statement was similar or the differences in percentage as seen in the table are well within chance variation [χ^2 (2, N =130) = 4.2, *p* =.123].

Table 10

ECHS Will Benefit the Partnering High School(s) by Increasing Enrollment: Perceptions of HSIs and CIs

ECHS will benefit partnering high schools by increasing enrollment	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	1	(2.9%)	2	(2.1%)	3	(2.3%)
Disagree	3	(8.6%)	11	(11.6%)	14	(10.6%)
Agree	17	(48.6%)	61	(64.2%)	78	(59.1%)
Strongly Agree	14	(40%)	21	(22.1%)	35	(26.9%)
Total	35	(100%)	95	(100%)	130	(100%)

All percentages are with respect to the column total.

Survey item 14: ECHS will benefit the partnering high school(s) by improving student retention: Perceptions of HSIs and CIs.

Four CI skipped the question on whether ECHS would benefit the partnering high schools by improving retention rates. Of 35 HSIs, 54.3% agreed with the statement and 28.6% agreed strongly making overall agreement about 83%. Among 95 CIs who expressed their opinion on the question, the percentage who strongly disagreed, disagreed, agreed and strongly agreed were 4.3%, 23.7%, 58.1% and 14.0%, respectively (Table 11). Strong disagreement and disagreement was pooled together for making the chi-square test valid. The test indicated that the proportion of HSIs and CIs who expressed different degree of agreement with the statement was similar or the differences in percentage as seen in the table are well within chance variation [χ^2 (2, N =128) = 4.3, *1* =.118].

Table 11

ECHS Will Benefit the Partnering High School(s) by Improving Retention Rates: Perceptions of HSIs and CIs

ECHS will benefit partnering high schools by improving retention rates	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	1	(2.9%)	4	(4.3%)	5	(3.8%)
Disagree	5	(14.3%)	22	(23.7%)	27	(20.5%)
Agree	19	(54.3%)	54	(58.1%)	73	(55.3%)
Strongly Agree	10	(28.6%)	13	(14%)	23	(18%)
Total	35	(100%)	93	(100%)	128	(100%)

All percentages are with respect to the column total.

Survey item 15: ECHS will benefit the partnering college(s) reducing the need for remedial classes: Perceptions of HSIs and CIs.

Four CI skipped the question on whether ECHS would benefit the partnering high schools by reducing the need for remedial classes. Of 35 HSIs, 54.3% agreed with the statement and 14.3% agreed strongly making overall agreement about 69%. Among 95 CIs who expressed their opinion on the question, the percentage who strongly disagreed, disagreed, agreed and strongly agreed were 12.6%, 47.4%, 35.8% and 4.2%, respectively (Table 12). Strong agreement and agreement was pooled together for making the chi-square test valid. The test indicated that the proportion of HSIs and CIs who expressed different degree of agreement with the statement was not similar or the difference in percentage as seen in the table is statistically significant

[χ^2 (2, N =130) = 9.0 =.011].

Table 12

ECHS Will Benefit the Partnering High School(s) by Reducing the Need for Remedial Classes: Perceptions of HSIs and CIs

ECHS will benefit partnering high schools by reducing the need for remedial classes	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
Strongly Disagree	1	(2.9%)	12	(12.6%)	13	(9.8%)
Disagree	10	(28.6%)	45	(47.4%)	55	(41.7%)
Agree	19	(54.3%)	34	(35.8%)	53	(40.2%)
Strongly Agree	5	(14.3%)	4	(4.2%)	9	(6.9%)
Total	35	(100%)	95	(100%)	130	(100%)

All percentages are with respect to the column total.

Survey item 16: Type institution that will benefit the most from the ECHS: Perceptions of HSI and CI.

One HSI and two CIs did not express their opinion regarding the type of institution that will benefit most by ECHS. The percentage of HSIs who opined that the institution that will benefit most is the Partnering College, The Partnering School System or Both the Institutions were 8.8%, 20.6% and 55.9%, respectively. The corresponding proportions among CIs were 9.5%, 25.3% and 49.5%, respectively (Table 13). Chi-square test was carried for comparing proportion of HSIs and CIs in different groups after pooling those who opined 'neither institution' or 'other' together. The test suggested that the proportions are similar among HSIs and CIs [χ^2 (3, N =129) = 0.5, p = .928].

Table 13

Type of Institution that will Benefit the Most from the ECHS: Perceptions of HSI and CI

Type of institution that will benefit the most from the ECHS	High school instructor		College instructor		Total	
	No.	%	No.	%	No.	%
The Partnering College	3	(8.8%)	9	(9.5%)	12	(9.1%)
The Partnering School System (S)	7	(20.6%)	24	(25.3%)	31	(23.5%)
Both Institutions will Benefit Equally	19	(55.9%)	47	(49.5%)	66	(50%)
Neither Institution	0	(0%)	8	(8.4%)	8	(6.2%)
Other	5	(14.7%)	7	(7.4%)	12	(9.3%)
Total	34	(100%)	95	(100%)	129	(100%)

All percentages are with respect to the column total.

Research Questions 5 and 6: Combining responses pertaining to the perceptions of high school and college instructors regarding purpose and benefits of Early College High School

Survey questions 5 to 8 regarding perception of HSIs and CIs on the four purpose of ECHS (viz, increase access to college for students from low-income families, reduce the high school drop-out rate, prepare students for success in higher education and incorporate job skills into the curriculum) was evaluated individually and the perception of HSIs and CIs was found to be different in all the four cases. It is desirable to have a single measure of perception regarding the purpose of ECHS. Cronbach's alpha estimated for the four items (questions 5 to 8) was 0.79, above the conventional level of .7 for deciding whether the items can be assumed to reliably measure an underlying construct. Hence, the responses to the four items were summed up (ignoring instructors who skipped any of the four questions) to derive the single measure. The combined measure for purpose perception was thus available for 123 instructors.

Similarly, the Cronbach's alpha estimated for question numbers 10 to 15 relating to the benefits of ECHS (viz., reducing overcrowding, improving graduation rates,

providing an optional school for students not interested in the traditional high school experience, increasing enrollment, improving retention rates and reducing the need for remedial classes) was also .79 suggesting that the six questions might be measuring the same underlying construct. Therefore the responses in Likert type scale for the six questions were also summed up to obtain a single measure of benefit of ECHS, as perceived by the high school and college instructors. The measure was available for 121 instructors after ignoring instructors who skipped any of the six questions.

Checking normality of the derived constructs

Central limit theorem states that sum of 'n' number of independently and identically distributed random variable would follow normal distribution, irrespective of the parent distribution for large n. For the first construct of purpose of ECHS we have only four constituent variables and the second construct is derived from six items. Kolmogorov-Smirnov test indicated that the distribution of purpose construct is not normally distributed (N = 123, Kolmogorov-Smirnov Z = 2.08; $p < .001$) where as the second construct does follow normal distribution (N = 121, Kolmogorov-Smirnov Z = 0.94; $p = .336$).

Comparison of overall scores for the perceptions of purpose and benefits of ECHS between HSIs and CIs

Descriptive statistics of the combined measure of purpose and benefits of ECHS for HSIs and CIs is depicted in Table 14. The average score for the combined measure of purpose of ECHS among 35 HSIs was 17.63 (SD = 1.99) compared to 15.31 (SD = 3.02) among 88 CIs. Independent t-test for comparison of two means assumes normality (moderate departure from normality may not affect the validity of the test) and equality of

variance (unequal variance compromises the validity of the test). Hence t-test is preceded by an F-test for comparison of variances and when the hypothesis of equal variance is rejected, the df associated with the t-test is modified to make the test valid. F-test for comparing the variances of perception of purpose of ECHS between HSIs and CIs indicated that the variances are not similar (Levene's test for equality of variance $F(1,121)= 6.6$; $p = .011$). Therefore t-test was carried out not assuming equality of variance and the test indicated that the difference in means is big enough to be statistically significant [$t_{(94.0)} = 5.0$; $p < .001$).

The average score for the combined measure of benefit of ECHS among 34 HSIs was 23.91 (SD = 4.45) compared to 20.97 (SD = 4.23) among 87 CIs. F-test for comparing the variances of perception of benefits of ECHS between HSIs and CIs indicated that the variances are similar (Levene's test for equality of variance $F(1,119)= 0.01$; $p = .922$). Therefore t-test was carried out assuming equality of variance and the test indicated that the difference in means is big enough to be statistically significant [$t_{(119)} = 5.0$; $p = .001$). The distribution of the scores among HSIs and CIs is depicted in figure 1 using box-plots.

Table 14

Combined Measure of Perception of Purpose and Benefits of ECHS among HSIs and CIs

	Instructor	N	Minimum	Maximum	Mean	SD
Purpose of ECHS	High school	35	12	20	17.63	1.987
	College	88	5	20	15.31	3.015
Benefits of ECHS	High school	34	14	30	23.91	4.454
	College	87	10	30	20.97	4.225

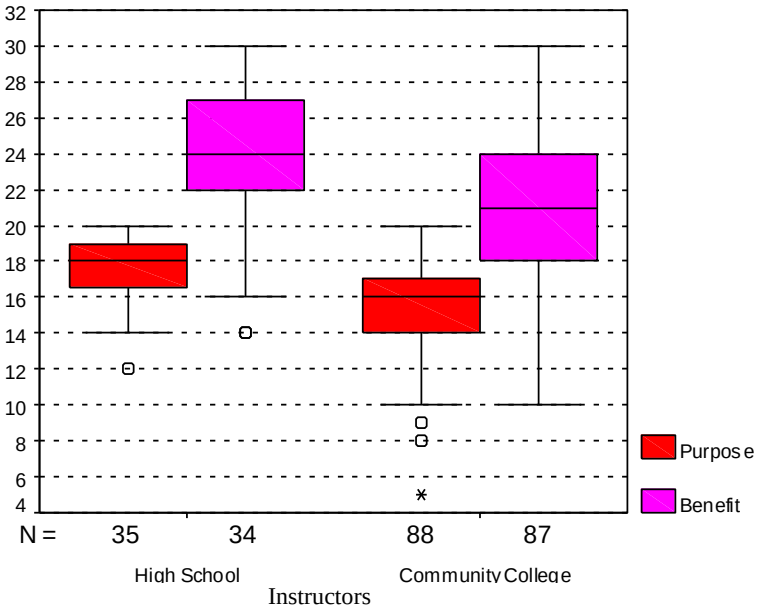


Figure 1. Box-plot of combined score of perception about purpose and benefits of ECHS.

Difference on the combined scores of purpose and benefit perception of ECHS.

The descriptive statistics for combined scores of purpose and benefit perception of ECHS for the cross-classification of instructors (High School, College) and schools with graduations (Y/N) is presented in Table 15. Presentation of the distribution of scores for the cross-classification is presented in Figure 2 with box plots. It is clear from the table and the graph that instructors from institutions with graduation class have higher mean scores on both purpose and benefit perception, irrespective of whether the instructors teach in schools or colleges. Among HSIs from institutions with graduation class, the mean purpose perception score is 18.7 compared to 17.2 among HSIs from institutions without graduating class. Corresponding figures for CI is 16.0 and 14.7. Similarly, the benefit perception score among HSIs from institutions with and without graduation class was 25.0 and 23.3 whereas it was 21.7 and 20.3, among CIs.

Formal comparison of the scores was attempted using two-way ANOVA and the results are presented in Table 16. The difference in means of combined purpose

perception scores between schools with and without graduation class, after allowing for the differences in instructor type (17.3 v/s 15.9) is statistically significant, F(5 , 126) = 4.844; $p < 0.000$. The difference in means of combined benefit perception scores between schools with and without graduation class, after allowing for the differences in instructor type (23.3 v/s 21.8) is not big enough to be statistically significant, F(5 , 126) = 3.527; $p = 0.005$.

It may be noted that the homogeneity of variance assumption of ANOVA was not met for case of purpose perception scores (F (5, 126) = 3.647; $p = .004$). In the case of benefit perceptions scores, homogeneity of variance assumption of ANOVA was met, F (5, 126) = .345; $p = .885$).

Table 15

Descriptive Statistics of Combined Scores of Purpose and Benefit Perception of ECHS among HSIs and CIs from Schools with and without Graduation Class

Instructor	Schools with graduation class[a]						Total		
	Yes			No					
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Combined Score of Purpose perception of ECHS									
High School	9	18.7	1.5	25	17.2	2.0	34	17.6	2.0
College	38	16.0	2.3	44	14.7	3.1	82	15.3	2.8
Total	47	16.5	2.4	69	15.6	3.0	116	16.0	2.8
Combined Score of benefit perception of ECHS									
High School	9	25.0	4.5	24	23.3	4.5	33	23.8	4.5
College	38	21.7	3.9	46	20.3	4.5	84	21.0	4.3
Total	47	22.3	4.2	70	21.4	4.7	117	21.8	4.5

[a] Seven respondents skipped the question on whether the school had graduation class.

Table 16

Two-way ANOVA of Combined Scores of Purpose and Benefit Perceptions of ECHS

Tests Between-Subjects Effects

Dependent Variable: Combined score of purpose

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	199.332[a]	5	39.866	4.844	0
Intercept	7419.677	1	7419.677	901.601	0
Q1	62.307	1	62.307	7.571	0.007
Q3	29.878	2	14.939	1.815	0.167
Q1 * Q3	2.616	2	1.308	0.159	0.853
Error	1036.911	126	8.229		
Total	34012	132			
Corrected Total	1236.242	131			

a. R Squared = .161 (Adjusted R Squared = .128)

Levene's Test of Equality of Error Variance [a]

Dependent Variable: Combined score of purpose

F	df1	df2	Sig.
3.647	5	126	.004

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a. Design: Intercept+Q1+Q3+Q1*Q3

Tests Between-Subjects Effects

Dependent Variable: Combined score of benefits

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	391.587[a]	5	78.317	3.527	0.005
Intercept	13277.2	1	13277.2	597.891	0
Q1	225.685	1	225.685	10.163	0.002
Q3	31.967	2	15.983	0.72	0.489
Q1 * Q3	56.538	2	28.269	1.273	0.284
Error	2798.049	126	22.207		
Total	62414	132			
Corrected Total	3189.636	131			

a. R Squared = .123 (Adjusted R Squared = .088)

Levene's Test of Equality of Error Variance [a]

Dependent Variable: Combined score of benefits

F	df1	df2	Sig.
.345	5	126	.885

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a. Design: Intercept+Q1+Q3+Q1*Q3

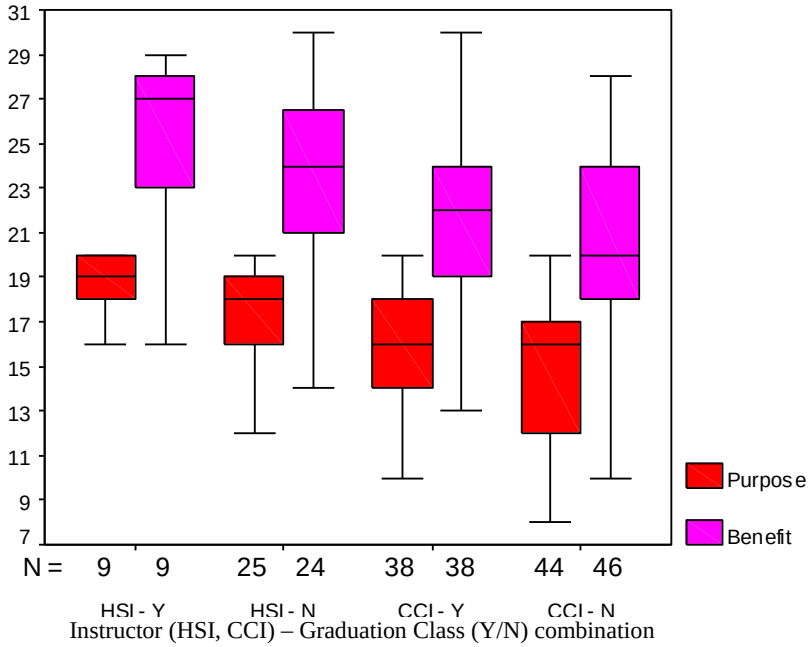


Figure 2. Box-plot of combined score of perception about purpose and benefits of ECHS among High school and college instructors from institutions with and without graduation class.

Research Question 7: Perceptions of College Instructors and High School Teachers within the Three Regions of North Carolina (Mountain, Coastal Plains, and Piedmont) Regarding the Purpose and the Benefits of the Early College in North Carolina

The descriptive statistics of combined scores of purpose and benefit perception of ECHS for the cross-classification of instructors (High School, College) and geographic region (Mountain, Coastal plains & Piedmont) is presented in Table 17. Among HSIs from institutions belonging to mountain areas, coastal plains and piedmont, the mean purpose perception scores were 17.6, 17.0 and 17.8, respectively. Corresponding figures for CI is 15.0, 15.5 and 15.3. Similarly, the benefit perception score among HSIs belonging to mountain areas, coastal plains and piedmont, were 22.1, 24.5 and 24.7, respectively. Among CIs, the scores were 19.7, 20.0 and 22.2, respectively. It may be seen that the HSIs maintains higher score for both purpose and benefit perception

compared to CIs in all the three geographic regions as well. Two-way ANOVA was carried out for formal comparison of the scores and the results are presented in Table 18. The difference in means of combined purpose perception scores among the three geographic regions, after allowing for the differences in instructor type – Mountain (16.2), Coastal plains (16.6) & Piedmont(16.5) – is statistically significant, $F(5 , 126) = 4.203$; $p = .001$. The difference in means of combined benefit perception scores among the three geographic regions, after allowing for the differences in instructor type – Mountain (21.0), Coastal plains (21.6) & Piedmont(23.5) was statistically significant, $F(5 , 126) = 3.744$; $p = 0.003$. Post-hoc comparison using Bonferroni correction for multiple comparison picked up mean benefit purpose score to be statistically different between institutions in the Mountain and Piedmont region (mean difference 2.49, $p = .021$).

Table 17

Descriptive Statistics of Combined Scores of Purpose and Benefit Perceptions of ECHS among HSIs and CIs from Schools of Mountain, Coastal Plains and Piedmont Regions

Geographic region	Instructor						Total		
	High School			College					
	n	Mean	SD	n	Mean	SD	n	Mean	SD
Combined Score of Purpose perception of ECHS									
Mountain	10	17.6	2.5	21	15.0	2.7	31	15.8	2.9
Coastal plains	4	17.0	2.0	26	15.5	3.9	30	15.7	3.7
Piedmont	21	17.8	1.8	41	15.3	2.6	62	16.2	2.6
Total	35	17.6	2.0	88	15.3	3.0	123	16.0	2.9
Combined Score of benefit perception of ECHS									
Mountain	10	22.1	5.5	22	19.7	5.1	32	20.5	5.2
Coastal plains	4	24.5	6.1	23	20.0	4.1	27	20.6	4.6
Piedmont	20	24.7	3.5	42	22.2	3.5	62	23.0	3.7
Total	34	23.9	4.5	87	21.0	4.2	121	21.8	4.5

Table 18

Two-way ANOVA of Combined Scores of Purpose and Benefit Perceptions of ECHS

Tests Between-Subjects Effects

Dependent Variable: Combined score of purpose

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	176.714[a]	5	35.343	4.203	.001
Intercept	19090.958	1	19090.958	2270.314	.000
Q1	100.726	1	100.726	11.978	.001
Q3	.385	2	.193	.023	.977
Q1 * Q3	5.344	2	2.672	.318	.728
Error	1059.528	126	8.409		
Total	34012.000	132			
Corrected Total	1236.242	131			

a. R Squared = .143 (Adjusted R Squared = .109)

Levene's Test of Equality of Error Variance [a]

Dependent Variable: Combined score of purpose

F	df1	df2	Sig.
3.431	5	126	.006

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a. Design: Intercept+Q1+Q3+Q1*Q17

Tests Between-Subjects Effects

Dependent Variable: Combined score of benefits

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	412.556[a]	5	82.511	3.744	.003
Intercept	34369.721	1	34369.721	1559.402	.000
Q1	228.341	1	228.341	10.360	.002
Q3	63.998	2	31.999	1.452	.238
Q1 * Q3	21.251	2	10.626	.482	.619
Error	2777.081	126	22.040		
Total	62414.000	132			
Corrected Total	3189.636	131			

a. R Squared = .129 (Adjusted R Squared = .095)

Levene's Test of Equality of Error Variance [a]

Dependent Variable: Combined score of benefits

F	df1	df2	Sig.
.526	5	126	.756

Tests the null hypothesis that the error variance of the dependent variable is equal across groups

a. Design: Intercept+Q1+Q3+Q1*Q17

Summary

Chapter 4 included a presentation of the results from the web based survey. These results focused on how the High School Teachers and College Instructors perceived the purpose and benefits of the Early College program. Chapter 5 will discuss conclusions of this study and recommendations for future study.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to obtain insight from high school teachers and college instructors who teach within the Early College High School program in North Carolina, regarding their perceptions of the Early College High School Initiative. As this initiative is a relatively new (less than 10 years), there is little research about the program. This study was designed to focus on the purpose and benefits of the Early College High School to the participating institutions and to the students they serve. The perceptions of these characteristics by college instructors and high school teachers will become a source of information that will increase understanding of the Early College High School program and its contributions to education.

This chapter begins with a summary of the study that includes an overview of the entire study including the problem, types of data that were gathered, and the methods used to analyze the data. The last two sections will describe conclusions and recommendations for future studies.

Summary of Study

Opening its first Early College High School on the campus of Guildford Technical College in 2004, the New Schools Project group has been instrumental in placing 70 Early College High School across the state of North Carolina (New Schools Project, 2009).

The Early College High School program was created to counter the large dropout rate in the United States. The dropout rate is so massive, that in the near future, jobs will have to be left vacant because of the lack of skilled workers. Without skilled workers to fill the jobs the United States of America would challenges maintaining its status as a world leader in the marketplace (Thesis, 2009). The dropout problem also causes an impact on our nation's economic system as students without high school diplomas earn about $9,245 less per year than high school graduates (Doland, 2001). Nearly half of all head of households on welfare and one-half of all high school dropouts are jobless (Sum et al., 2003). In examining dropout rate statistics, the data revealed that a large majority of students were from low economic backgrounds and approximately half of the high school dropouts were African-American and Latino students. (Steinberg & Almeida, 2004). These factors were key motives in creating the Early College High School program.

The Early College High School is a successor to a project that started in the 1960s at Simon's Rock, Massachusetts. This school was the first school known to attempt combining high school and college classes so that students could receive a college degree in the same time period of time as a high school diploma. This project later was expanded on by Dr. Janet Lieberman, who designed the Middle College concept. Unfortunately the Middle College ran into some governmental issues with finance and was never fully implemented. In 2002, the first three Early College High School opened in the United States. Since 2002, over 200 schools in 24 states have been started with the help of partnering organizations with an ultimate goal of opening 250 schools.

North Carolina leads the country, with 70 Early College High School (Public Schools of North Carolina, 2010). In keeping with the purpose for the Early College High School program, 74% of those enrolled are students of color. Of the 74%, 28% are Black and 38% are Latino. Fifty-six percent of the students are from low income families. The benefits of the Early College High School are that more students stay in school, receive higher education degrees, have the skills to pursue courses at a 4-year institution, and obtainment of a solid position in the job market (Jobs for the Future, 2009). Utilizing this information, the following research questions were developed:

1. What are the perceptions of college instructors regarding the purpose of the Early College High School Initiative in North Carolina?
2. What are the perceptions of high school teachers regarding the purpose of the Early College High School in North Carolina?
3. What are the perceptions of college instructors regarding the educational benefits of the Early College High School in North Carolina?
4. What are the perceptions of high school teachers regarding the educational benefits of the Early College High School in North Carolina?
5. Are there significant differences in the perceptions of community college instructors and high school teachers regarding the purpose and benefits of the Early College High School in North Carolina?
6. Are there significant differences in the perceptions of college instructors and high school teachers regarding the purpose and the benefits of the Early College in North Carolina from schools that have held graduations and those who have not had a graduating class?

7. Are there significant differences in the perceptions of college instructors and high school teachers within the three regions of North Carolina (Mountain, Coastal Plains, and Piedmont) regarding the purpose and the benefits of the Early College in North Carolina?

Methodology

To obtain answers to the research questions, a previously developed valid and reliable instrument was used. This instrument was designed and tested by Dr. Jason Chambers for his study entitled, *North Carolina Community College Presidents' and School Superintendents' Perceptions of the Early College Program*. This instrument was chosen because the questions were related to the information needed for my study, though the population under study differed. As participants in this study would be a sample of convenience, the instrument was converted to a web-based survey to reach as many people as possible. Utilizing Survey Share, a program that allows a person to create a survey and converts the data to aggregate data, the survey was created along with a cover page that explained its purpose. The cover page also doubled as a consent form; participants agreed to read the cover page/consent form prior to starting the survey. Security was added by having participants type in a password that was assigned to them in previous instructions. The password was to prevent anyone from accessing the survey if the survey was discovered during a web search.

Study participants consisted of high school and college instructors who have taught Early College High School students. As it would be difficult to contact each instructor personally, the aid of college liaisons was enlisted. Information was

provided to the liaison about the study and an instructional document for the participants was included. All of the 69 schools were contacted. Of those schools, 38 responded. Six liaisons declined to help, but 32 (46%) responded in a positive manner. A total of 132 subjects participated in the online survey; 35 (26.5%) high school instructors and 97 (73.5%) college instructors.

Review of Findings

This study is one of the first comprehensive assessments of high school teachers and high college instructors regarding the Early College in North Carolina. This study was to provide information that may be useful in future projects and designs rather than predict the success or failure of the Early College High School. As stated earlier, this initiative is less than 10 years old and little data about its success is available. However, the rapidly growing number of schools in North Carolina and the recently released data that indicated half of North Carolina schools had zero dropouts as opposed to a 30% dropout rate in most states (Seltzer, 2010); is a strong indication of success.

The results of the data collected from the survey questions were mixed and the majority of responses failed to accept the null hypothesis of the research questions. The significant differences identified at key points in the data provide insight into what aspects of the program are working as well as points where there may be opportunities for improvement. Some of the most striking results relate to the variability between the perceptions of high school teachers involved in the initiative versus their college instructor counterparts. This variability may have implications for how information about the program, its purpose and its benefits can be better communicated to all stakeholders.

Research question 1; *what are the perceptions of college instructors regarding the purpose of the Early College High School Initiative in North Carolina* and research question 2; *what are the perceptions of high school teachers regarding the purpose of the Early College High School Initiative in North Carolina,* focused on the perceptions of college instructors and high school teachers in regards to the purpose of the Early College. The first 2 questions looked at individual group perceptions (college instructors and high school teachers) regarding the purpose of the Early College. The perception data that was used for research questions 1 and 2 was obtained from the results of survey questions 5 – 8 which focused on the purpose of the Early College High School. The high school teachers had a higher agreement with all survey questions regarding the purpose of the Early College High School than college instructors. The results suggest that high school teachers appear to be more aware of the purpose of the initiative. The results connect to Principal Misenheimer's discussion on student teacher relationships within the Early College. These relationships provide the support students need in order to complete their studies. Principal Misenheimer states, "We know our students' very well and they know us very well" (Misenheimer, 2010). The high school teachers' results reflect the same perception of College Presidents and High School Superintendents found in Dr. Jason Chambers' study (2009). Dr. Chambers study showed strong agreement to the survey questions regarding the purpose of the Early College High School by College Presidents and High School Superintendents. Dr. Chambers reports that there were many positive comments from both College Presidents and High School Superintendents regarding the Early College. Dr. Chambers (2009) writes that College Presidents and High School Superintendents perceive that most of the goals for the Early College High School have

already been accomplished. Such findings have implications that unlike college instructors and high school teachers, College Presidents and High School Superintendents are more familiar with the goals and objectives of the Early College and would therefore have similar perceptions.

The college instructors did not share the same perceptions as the high school teachers and appeared to be less positive about the purpose of the Early College High School. The college instructors may be skeptical as the program focuses on underrepresented high school student identified as; low performing, at-risk students (Jobs for the Future, 2003). The concerns of college instructors may lie in the student's ability and maturity to handle the rigorous demands of higher education. Some educators are concerned with the rapid growth of the Early College High School. These educators are afraid the acceleration of coursework will hurt rather than aid in the education of the underprivileged high school student (Jacobson, 2005).

Research question 3*; what are the perceptions of college instructors regarding the educational benefits of the Early College High School Initiative in North Carolina* and research question 4; *what are the perceptions of high school teachers regarding the educational benefits of the Early College High School Initiative in North Carolina,* focused on the perceptions of college instructors and high school teachers in regards to the benefits of the Early College. The questions looked college instructors and high school teachers. The perception data that was used for research questions 3 and 4 was obtained from the results of survey questions 9 – 16 which focused on the benefits of the Early College High School. The perception data that focused on the benefits of the Early College High School for college instructors and high school teachers showed more unison than the

data for the purpose of Early College High School. College instructors and high school teachers agreed the benefits for students included the opportunity for students to attend another school outside the traditional setting of a high school. The college instructors and high school teachers perceived that although the students would be provided a different educational setting did not mean that the new setting would not reduce overcrowding nor increase enrollment. The high school teachers had a more positive response than the college instructors as to the reduction of remedial classes, retention rates, job skill incorporation, and graduation rates.

Research question 5; *are there significant differences in the perceptions of college Instructors and high school teachers regarding the purpose and benefits of the Early College High School Initiative in North Carolina*, compared the responses of the two groups to see if the results were statistically significant. The significant differences in perception between high school teachers and college instructors have strong implications for the communication structure currently in place for the program. The Early College High School program head is the high school principal, and it is the principal that obtains the training to head the program at the assigned college, and it is the principal who relays information back to the high school faculty as appropriate. The missing component in this scenario is the college instructor. Little or no information is disseminated to the college instructor and there is no avenue of communication to facilitate this. It is the researcher's belief that because so little information has been distributed, college instructors are uninformed and therefore unaware of the purpose or the benefits of the program.

This challenge is further aggravated by the fact that the instructors are only with the high school students during one semester, whereas the high school teachers are with the students every day and interact with the students on a daily basis. In addition, classes in the "college portion" of the Early College High School are supposed to remain unchanged to avoid any reduction in the rigor or content of the course for the high school students. Though this is sound rationale for not making the college instructors aware of individual students, it would appear that there still needs to be a mechanism in place for communication about the program in general.

In comparing this study's results with the results that Dr. Chambers received from College Presidents and High School Superintendents, it reflects that high school teachers' perceptions are aligned closely with that of College Presidents and High School Superintendents. The difference of perception may also lie in the collaboration between groups. Dr. Chambers two administrative groups, College Presidents and High School Superintendents. Since the early 1900s six-year high schools have been discussed (Ratcliff, 1987b, p. 13). The Early College High School is creating a bridge between the two institutions. With the concept of the Early College High School College Presidents and High School Superintendents met to decide on core principles. Therefore, College Presidents and High School Superintendents would have a common understanding of the purpose and benefits of the Early College High School and would answer survey questions similarly.

Variability in the responses related to the perceived educational purpose and benefits of the program indicate that this program is still new and many statistics regarding

retention and graduation rates have not yet been gathered and released. Once statistics are released responses to these questions may change.

Research question 6; *are there significant differences in the perceptions of college instructors and high school teachers regarding the purpose and the benefits of the Early College High School Initiative in North Carolina from schools that have held graduations and those who have yet to hold a graduating*, investigates the influence of having a graduating class on perceptions of college instructors and high school teachers on the purpose and benefits of the Early College High School. The descriptive statistics for combined scores of purpose and benefit perception indicated that instructors from institutions with graduation classes have higher mean scores on both purpose and benefit perception, irrespective of whether the instructors teach in schools or colleges. As with any concept, the longer the concept is in place, the more the concept will be accepted and understood. The history of the Early College High School enforces the ideal that the longer the concept is established the more it becomes understood. The concept of the combining the last 2 years of high school and the first 2 years of college was conceived in the early 1960s but due to various problems the initial attempt did not flourish (The Evolution of an Educational Innovation, 2006). In the 1970s the concept of Early College began again with Dr. Janet Lieberman's Middle High School concept. The Middle High School is still a part of the educational system in the United States (Lieberman 2004). Building on the Middle College High School the Early College High School was established in 2002 (Jobs for the Future, 2003). Although still in its infancy the Early College High School has expanded quickly and more understand of the Early College High School purpose and benefits are being brought forth through research. suggests that

understanding among both groups of instructors increase with the length of time that the program exists on a campus.

Research question 7; *are there significant differences in the perceptions of college instructors and high school teachers within the three regions of North Carolina (Mountain, Coastal Plains, and Piedmont) regarding the purpose and the benefits of the Early College High School Initiative in North Carolina*, focus on the regional differences in the perception of the Early College High School Program. An examination of regional differences indicated that high school teachers and college instructors, regardless of the region of North Carolina, had similar responses.

The significant differences in perception between high school teachers and college instructors have strong implications for the communication structure currently in place for the program. The Early College High School program head is the high school principal, and it is the principal that obtains the training to head the program at the assigned college, and it is the principal who relays information back to the high school faculty as appropriate. The missing component in this scenario is the college instructor. Little or no information is disseminated to the college instructor and there is no avenue of communication to facilitate this. It is the researcher's belief that because so little information has been distributed, college instructors are uninformed and therefore unaware of the purpose or the benefits of the program.

This challenge is further aggravated by the fact that the instructors are only with the high school students during one semester, whereas the high school teachers are with the students every day and interact with the students on a daily basis. In addition, classes in the "college portion" of the Early College High School are supposed to remain unchanged

to avoid any reduction in the rigor or content of the course for the high school students. Though this is sound rationale for not making the college instructors aware of individual students, it would appear that there still needs to be a mechanism in place for communication about the program in general.

In reviewing the research for this study it became clear, that this exceptional program in its infancy; seems to be working. The Early College High School Initiative is the first program to provide an avenue for the underrepresented student to obtain a higher education. In President Obama's speech on September 8, 2009 he spoke with children about succeeding and meeting their goals. The Early College High School will help in students to achieve their goals. As with any new project, research needs to be monitored for continued development and improvement. As more and more students graduate from this program, more data will be available to researchers that will provide insight into the effectiveness of the program.

The reason behind the high school teachers' awareness may be attributed to more interaction with the students. The Early College High School students spend more time in the high school setting with their high school teachers. The high school teachers encourage and help the students stay focus. Principal Misenheimer spoke about relationships with the students and high school teachers; "We know our students' very well and they know us very well" (Misenheimer, 2010). The college instructors do not have this relationship with the Early College students and maybe unfamiliar with the concepts of the initiative. College instructors are not notified that Early College students will be in the classrooms so that the environment remains the same and the Early College students are not given special treatment.

Recommendations for Future Research

Early College is funded for a five year period and then must be sustained by the local school systems, colleges, and through outside partnerships. Therefore, even though finance was not a focus of this study, a first recommendation for future study involving the Early College High School should include investigating the cost factor of sustaining the program after the foundation funding has ended. Identifying the cost-benefit of the program as more students graduate, and the economic arguments that can be made to support the funding of the program will be vital to sustaining it over the long-term.

In 5 to 10 years a repeat study focusing on changes of the Early College High School and the effects of the program would provide information on the progress of the program. The present study provides a strong starting point for further study related to (a) measuring the dropout rate between Early College High Schools and traditional high schools, (b) measuring the retention rate between Early College High Schools and traditional schools, and (c) determining how many students continue on to postsecondary education following their Early College High School graduation. Future studies may want to focus on the following:

1. The cost factor of sustaining the program after the foundation funding has ended
2. Measuring the dropout rate between Early College High Schools and traditional high schools
3. Measuring the retention rate between Early College High Schools and traditional schools
4. Determining how many students continue on to 4 year institutions following their Early College High School graduation

5. Follow-up with employees from Early College High Schools
6. Should all high schools become Early College High Schools?
7. Measuring the grade performance rate of Early College High School students to traditional high school students.

Conclusions

The purpose of this study was to provide some foundational insight into the perceptions of educators at both the high school and college level on the purpose and benefits of the Early College High School Program in North Carolina. The results of this study indicate reflect early data related to the efficacy of the program, indicating that the program is fulfilling its purpose and is supporting students who might not otherwise be fully engaged in their high school experience. As the Early College programs mature and more graduates are produced from them, more data will be available about program outcomes, and these outcomes can be placed alongside the results of this study as program planners and administrators plan for the future.

Programs like the Early College High School Program offer an innovative solution to the relatively common and seemingly mundane challenge presented by students who are not engaged in the traditional high school format. Early College initiatives and programs like those in place throughout North Carolina open new doors for students and offer educators solutions to escalating classroom challenges presented by diverse student needs and external demands for accountability and efficiency.

In conclusion, these words penned by Jonathan Kozol; writer, educator, and activist are offered for thought:

> More money is put into prisons than into schools. That, in itself, is the description of a nation bent on suicide. I mean, what is more precious to us than our own children? We are going to build a lot more prisons if we do not deal with the schools and their inequalities (Education and Literacy, 2004).

REFERENCES

A Portrait in Numbers. (2008). Retrieved September 15, 2009, from Jobs for the future: http://www.earlycolleges.org/Downloads/portrait%20in%20numbers9.pdf

Anderson, Charles (2009) "A viewpoint: common sense and belief formation", Management Decision, Vol. 47 Issue 3, pp.383 - 391

Alliance for Excellent Education (February 2003). *Fact Sheet.* Washington, D.C.

Alliance for Excellent Education. (2009, August). The High Cost of High School Dropouts: What the Nation Pays for Inadequate High Schools. Washington, D.C., United States of America.

American Institutes for Research . (2007). *Early College High School 2003-2005 Evaluation Report.* Washington DC: SRI International.

Amos, J. (2009, May 12). *Testifying Before Congress, Bob Wise, President of the Alliance for Excellent Education, Says Federal Policy Must Address the Needs of High Schools.* Retrieved November 19, 2010, from The Alliance for Excellent Education : http://www.all4ed.org/press_room/press_releases/05122009

Bae, S. (2008) High school dropping-out and returning: Case studies and policy recommendations. Ph.D. dissertation, University of Illinois at Urbana-Champaign, United States -- Illinois. Retrieved November 26, 2009, from Dissertations & Theses: Full Text.(Publication No. AAT 3337687).

Baldwin, B., Moffett, R. M., & Lane, K. E. (1992). The high school dropout: Antecedents, societal consequences and alternatives. *Journal of School Leadership*, 2 (3), p. 355-362.

Barton, Paul E. 2002. The Closing of the Education Frontier? Princeton, NJ: Policy Information Center, Educational Testing Service.

Beaufort County Community College . (2009). *Beaufort County Community College.* Retrieved January 04, 2010, from High School Student Programs: http://www.beaufortccc.edu/admisson/high.htm

Carter, H. M. (2004). *A case study of the Middle College High School, 1972-2003: An effort to improve the persistence of at risk students in high school and facilitate their access to college.* Doctoral dissertation, New York University.

Catterall, J. S. (1985). On the social costs of dropping out of schools. (Report No. 86-SEPT-3). Stanford, CA: Stanford University, Center for Educational Research.

Chambers, J. North Carolina community college presidents' and school superintendents' perceptions of the Early College program. Ed.D. dissertation, Western Carolina

University, United States -- North Carolina. Retrieved September 24, 2009, from Dissertations & Theses: Full Text.(Publication No. AAT 3360950).

Committee on Education and Labor. (2009, May 12). High School Dropout Crisis Threatens U.S. Economic Growth and Competiveness, Witnesses Tell House Panel. Washington, DC, United States of America.

Core Documents from the Early College High School Initiative. (2004). Retrieved February 28, 2008, from Early College High School Initiative: http://www.earlycolleges.org/Downloads/CorePrinciples.pdf

Core Principles. (2005). Retrieved April 22, 2008, from Early College High School Iniative: http://www.earlycolleges.org/Downloads/CorePrinciples.pdf

Cullen, C. & Moed, M.G. (1988). Serving high risk adolescents. In J. e. Lieberman (Ed.), *Collabortating with high schools* (pp. 37-49). New directions for community colleges, no. 63. San Francisco: Jossey-Bass.

Doland, E. (2001). *Give Yourself the Gift of a Degree*. Washington, DC: Employment Policy Foundation.

Dropout Rates in the United States: 2000. Washington: National Center for Educational Statistics.

Early College High School Initiative. (2007). *Early College High School Initiative Partner Organizations and Sponsors*. Retrieved May 10, 2010, from Early College High School Initiative: http://www.earlycolleges.org/partners.html

Education and Literacy. (2004). Education and Literacy. Retrieved August 10, 2010, from Changing the Present: http://www.changingthepresent.org/education_and_literacy/quotes

Fedstats. (2007, March 12). *Statistical Agencies*. Retrieved November 27, 2009, from National Center for Education Statistics: http://www.fedstats.gov/key_stats/index.php?id=nces

Freire, P. (2000). Pedagogy of the Oppressed . In P. Freire, *Pedagogy of the Oppressed* (p. 183). New York: Continuum International Publishing Group.

Gasper, J. Do delinquency and drug use lead to dropping out of high school? Ph.D. dissertation, The Johns Hopkins University, United States -- Maryland. Retrieved November 24, 2009, from Dissertations & Theses: Full Text.(Publication No. AAT 3357098).

Green, D. (2006). Historically Underserved Students: What We Know, What We Still Need to Know. *New Directions for Community Colleges* , 21-28.

Greene, J. P. & Winters, M. A. (2005). Public High School Graduation and College-Readiness Rates: 1991–2002. *Education Working Paper, 8*. Manhattan Institute for Policy Research. Retrieved November 23, 2009, from http://www.manhattan-institute.org/html/ewp_08.htm.

Greene, Jay P. and Marcus A. Winters. 2005. Public High School Graduation and College-Readiness Rates: 1991-2002. New York: Center for Civic Innovation, Manhattan Institute.

Harlow, C. (2003). Education and correctional populations. Bureau of Justice Statistics Special Report. Washington, DC: U.S. Department of Justice.

Hoffman, N., & Vargas, J. (2005, January). Integrating Grades 9 Through 14. Boston, Massachusetts, USA.

Jacobson, J. (2005, March 11). The Early College Experiment. *Chronicle of Higher Education* , *51*(27), A36.

Jobs for the Future. (2003). The Early College High School Initiative at a glance. Boston: Author. Available from http://www.earlycolleges.org/Downloads/ECHSIAtAGlancel20203.pdf

Kazis, R. (2009). *Lessons from Achieving the Dream for Federal Efforts to Improve College Completion Rates.* Jobs for the Future Foundation.

Kisker, Carrie Bourdon (2006). Integrating high school and community college: A historical policy analysis. Ph.D. dissertation, University of California, Los Angeles, United States -- California. Retrieved June 29, 2010, from Dissertations & Theses: Full Text.(Publication No. AAT 3247442).

Kisker, C. B. (2006). Integrating high school and the community college: Previous efforts and current possibilities. *Community College Review*, *34*(1), 68-86.

Lang, M. (2009, March 9). Obama sets goal of world's top graduation rate. College Park, Marland, USA.

Leak, D. E. (2006). *The Innovative Education Initiatives Act.* Raleigh: NC State Board of Education.

Lieberman, J. (2004). *The Early College High School concept: Requisites for success.* Boston: Jobs for the Future. Available from http://www.earlycolleges.org/Downloads/ECHSConcept.pdf

Lewin, T. (2010, February 7). For Students at Risk, Early College Proves a Draw. Raeford, NC, USA.

Miao, Jing and Haney, Walt. 2004. ‘‘High School Graduation Rates: Alternative Methods and Implications.’’ Education Policy Analysis Archives 12 (55). Retrieved April 6, 2007, from http://epaa.asu.edu/epaa/v12n55

Misenheimer, C. & Bayer, C. "Rowan County Early College Informational Update." North Carolina, RCCC Professional Development [Conference). 04 Jam. 2010.

National Center for Educational Statistics. (2000). *Condition of America's Public School Facilities: 1999*. Retrieved August 10, 2010, from National Center for Educational Statistics: http://nces.ed.gov/surveys/frss/publications/2000032/index.asp?sectionid=8

National Center for Education Statistics. (2009). The condition of education 2009. Washington, DC: U.S. Department of Education.

National Center for Educational Statistics . (2010, June 2). *Public School Graduates and Dropouts from the Common Core of Data: School Year 2007–08*. Retrieved June 29, 2010, from US Department of Education Institute of Education Science: http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2010341

NC Report Cards. (2009). AYP Four-year cohort graduation rate by group. Raleigh: State of North Carolina.
Available from http://www.ncreportcards.org/src/stateDetails.jsp?Page=1&pYear=2008-2009

Nelson Mandela. (no date provided). BrainyQuote.com. Retrieved June 17, 2010, from BrainyQuote.com Web site:
http://www.brainyquote.com/quotes/quotes/n/nelsonmand157855.html

New Schools Project. (2009, April). *New Schools Project*. Retrieved January 11, 2010, from http://newschoolsproject.org/page.php

New Schools Project. (2010). *State data show strong graduation rates for new schools.* Raleigh: New Schools Project.

Obama, P. B. (2009, September 08). Obama Education Speech Transcript.

Public Schools of North Carolina. (2010, May 3). NC Leads Nation in number of Early College High Schools. Retrieved June 29, 2010, from Public Schools of North Carolina: http://www.ncpublicschools.org/newsroom/news/2009-10/20100503-01Seltzer, M. (2010). *Early-College High Schools Beat the Odds.* Bethesda: Education Week .

Shaughnessy, M. F. (2010, May 17). An Interview with Michael Webb: Early College Initiative. Portales , New Mexico, USA.

Stoel, C. (1988). History of the high school connection. In J. E. Lieberman, (Ed.), Collaborating with high schools. *New Directions for Community Colleges,* (63), 13-3

Steinberg, A., & Almeida, C. (2004). *The Dropout Crisis: Promising Approaches in Prevention and Recovery*. Boston: Jobs for the Future.

Swanson, Christopher B., and Duncan Chaplin, "Counting High School Graduates when Graduates Count: Measuring Graduation Rates.

The Evolution of an Educational Innovation. (2006). Retrieved December 1, 2009, from Bard College at Simon's Rock: http://www.simons-rock.edu/about/story

Theis, D. A. (2009, October). *Guide to Adult Education for Work.* Retrieved October 3, 2009, from National Center on Education and the Economy: http://www.jff.org/sites/default/files/adult_ed_work_guide.pdf

US House of Representatives. (2009, May 12). *High School Dropout Crisis Threatens U.S. Economic Growth and Competiveness, Witnesses Tell House Panel.* Retrieved October 27, 2009, from Committee on Education and Labor: http://edlabor.house.gov/newsroom/2009/05/high-school-dropout-crisis-thr.shtml

Warren, J. R., & Halpern-Manners, A. (2007). Is the glass emptying filling up? Reconciling divergent trends in high school completion and dropout. Educational Researcher, 36(6), 335–343.

Wechsler, H.S. (2001). *Access to success in the urban high school: The middle college movement.* New York: Teachers College Press

APPENDIX A: LIAISON'S LETTER

UNC CHARLOTTE
College of Education

Department of Educational Leadership
9201 University City Blvd., Charlotte, NC 28223-0001
(704) 687-8730, www.uncc.edu

Dear Early College High School Liaison,

You are receiving this email as a follow up to our previous (phone conversation or email correspondence) in reference to my study and the need for data. My name is Ruth Parker and I am presently a doctoral student at UNC-Charlotte, working on my dissertation. I am studying North Carolina College Instructors' and High School Teachers' Perceptions of the Early College High School Program as it related to the program's purpose and benefits.

To gather data, I will need High School and College Instructors within your Early College High School Program to complete a very short online survey. To complete the survey, the participants will need to log onto www.echssurvey.com and enter the password **XXXXXX**. I have attached an instructional document that can be passed to your instructors that will guide them through the process.

I realize that I am asking for assistance at the end of the year when everyone is typically very busy. Any help that you can afford me will be greatly appreciated.
If you have any questions please do not hesitate to contact me.

Sincerely,

Ruth D. Parker

Ruth D. Parker
rdparker@uncc.edu
704-216-3787

APPENDIX B: PRINCIPAL'S LETTER

UNC CHARLOTTE
College of Education

Department of Educational Leadership
9201 University City Blvd., Charlotte, NC 28223-0001
(704) 687-8730, www.uncc.edu

Dear Early College High School Principal (name of principal),

You are receiving this email as a follow up to our previous (phone conversation or email correspondence) in reference to my study and the need for data. My name is Ruth Parker and I am presently a doctoral student at UNC-Charlotte, working on my dissertation. I am studying North Carolina College Instructors' and High School Teachers' Perceptions of the Early College High School Program as it related to the program's purpose and benefits.

To gather data, I will need High School and College Instructors within your Early College High School Program to complete a very short online survey. To complete the survey, the participants will need to log onto www.echssurvey.com and enter the password **XXXXXX**.

I realize that I am asking for assistance at the end of the year when everyone is typically very busy. Any help that you can afford me will be greatly appreciated.
If you have any questions please do not hesitate to contact me.

Sincerely,

Ruth D. Parker

Ruth D. Parker
rdparker@uncc.edu
704-216-3787

APPENDIX C: PARTICIPANTS' INSTRUCTION LETTER

UNC CHARLOTTE
College of Education

Department of Educational Leadership
9201 University City Blvd., Charlotte, NC 28223-0001
(704) 687-8730, www.uncc.edu

Dear Early College High School Instructor,

You are being asked to participate in a research study conducted by Ruth Parker, a doctoral student in the College of Educational Leadership at the University of North Carolina at Charlotte.

This research involves the study of the perceptions of high school and college faculty on the understanding of the Early College High School program. Your college and its faculty are being asked to participate as an Early College High School program exists on the campus in which you work.

The study involves a simple online survey. Each faculty member will be asked to answer 16 questions about their thoughts on the Early College High School program. The survey should only take 10 minutes to complete.

The information that you provide will be kept strictly confidential. The research report will not link any data or discussion to you or your institution. Any records that would relate to a participant with in this study, such as informed consent documentation, will be destroyed approximately three months after the study is completed.

It is hoped that the research will contribute information to enhance the further design and success of the Early College High School in North Carolina. The risks to you are considered minimal, as the objective of this study is to identify how instructors perceive the Early College High School Initiative.

Thank you for helping with this research. In order to access the survey, you will need to open up an Internet browser window and type the web address:

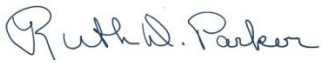
www.surveyshare.com/survey/take/?sid=103769

An overview of the project and a consent form will appear. Please read through the information and if you wish to continue enter the password **xxxxxx** (all lower case

letters) than click on the continue button. The short survey will appear. When you finish the survey, click on the finish button.

Thank you for helping with the research project. If you have any questions you may contact me through the information provided below.

Sincerely,



Ruth D. Parker
704-216-3787
rdparker@uncc.edu

APPENDIX D: IRB CONSENT WAIVER

UNC CHARLOTTE

Compliance Office / Office of Research Services

9201 University City Boulevard, Charlotte, NC 28223-0001
t/ 704.687.3311 f/ 704.687.2292 www.research.uncc.edu/comp/complian.cfm

Institutional Review Board (IRB) for Research with Human Subjects

Approval of Exemption

Protocol #	**10-04-16**			
Title:	**North Carolina Community College Instructors and High School Teachers' Perceptions of the Early College Program**			
Date:	**5/10/2010**			
Responsible Faculty	**Dr.**	**John**	**Gretes**	**Educational Leadership**
Investigator	**Ms.**	**Ruth**	**Parker**	**Educational Leadership**

The Institutional Review Board (IRB) certifies that the protocol listed above is exempt under category 2 .

Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:

a) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and

b) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

This approval will expire one year from the date of this letter. In order to continue conducting research under this protocol after one year, the "Annual Protocol Renewal Form" must be submitted to the IRB. Please note that it is the investigator's responsibility to promptly inform the committee of any changes in the proposed research, as well as any unanticipated problems that may arise involving risks to subjects. Amendment and Event Reporting forms are available on our web site: http://www.research.uncc.edu/comp/human.cfm

5/18/10

Dr. M. Lynn Exum, IRB Chair — Date

APPENDIX E: SURVEY COVER LETTER AND ONLINE CONSENT

UNC CHARLOTTE
College of Education

Department of Educational Leadership
9201 University City Blvd., Charlotte, NC 28223-0001
(704) 687-8730, www.uncc.edu

Welcome to "Perceptions of the Early College High School Program in North Carolina," a web-based survey that examines the way college and high school instructors view the Early College High School program in North Carolina.

Before taking part in this study, please read the consent form below and enter the password which was given to you via your liaison at the bottom of the page if you understand the statements and freely consent to participate in the study.

Consent Form

This study involves a web-based survey designed to gather data from college and high school instructors view the Early College High School program in North Carolina. The study is being conducted by Ruth Parker and it has been approved by the University of North Carolina at Charlotte Institutional Review Board. No deception is involved, and the study involves no risk to participants.

Participation in the study typically takes 10 to 15 minutes. Participants will answer 14 questions in the survey relating to the Early College High School program in North Carolina.

All responses are treated as confidential, and in no case will responses from individual participants be identified. Rather, all data will be pooled and published in aggregate form only. Participants should be aware, however, that the survey is not being run from a "secure" https server of the kind typically used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorized third parties (e.g., computer hackers).

Participation is voluntary. Those who decide not to take part in the survey will not suffer negative consequences. Participants have the right to close out the survey at anytime. If you have further questions or concerns about your rights as a participant in this study, contact the Compliance Office at (123) 456-7890. If you have questions concerning the study, contact the principal investigator, Ruth Parker at (704) 216-3787) or by email at parkerr@rowancabarrus.edu

If you are 18 years of age or older, understand the statements above, and freely consent to participate in the study, enter the password which was given to you via your liaison at the bottom of the page to begin the survey.

Appendix F: ONLINE SURVEY

North Carolina Early College High School Survey

1) Please indicate whether you are a:

- High School Teacher
- College Instructor/Professor

2) What Early College High School are you associated?

3) Has your college celebrated an Early College High School Graduation?

- Yes
- No

4) Please indicate the year your Early College High School opened.

- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010

5) The Early College High School will increase access to college for students from low-income families.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

6) The Early College High School will reduce the high school drop-out rate.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

7) The Early College High School will prepare students for success in higher education.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

8) The Early College High School will incorporate job skills into the curriculum.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

9) Which group of students will benefit the most from the Early College High School?

- Low performing, at-risk students
- High performing, gifted students
- Both groups will benefit equally
- Neither group will benefit

10) The Early College High School will benefit the partnering high school(s) by reducing overcrowding

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

11) The Early College High School will benefit the partnering high school(s) improving graduation rates.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

12) The Early College High School will benefit the partnering high school(s) providing an optional school for students not interested in the traditional high school experience.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

13) The Early College High School will benefit the partnering college by increasing enrollment.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

14) The Early College High School will benefit the partnering college by improving retention rates.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

15) The Early College High School will benefit the partnering college by reducing the need for remedial classes.

- Strongly Disagree
- Disagree
- Agree
- Strongly Agree

16) Which institution will benefit the most from the Early College High School?

- The partnering college
- The partnering school system(s)
- Both institutions will benefit equally
- Neither institution will benefit
- Other:
