

THE RELATIONSHIP BETWEEN CREDIT ACCEPTANCE AND
BACCAULAUREATE DEGREE PERSISTENCE FOR TRANSFER STUDENTS

By

Kimberly Tisdale Turk

A dissertation presented to the faculty of the Graduate School of Western Carolina
University in Partial Fulfillment of the Requirements for the Degree of Doctor of
Education.

Director: Dr. Meagan Karvonen
Associate Professor
Department of Psychology

Committee Members:
Dr. Mary Jean Herzog, School of Teaching and Learning
Dr. Casey Hurley, Department of Human Services

May 2012

ACKNOWLEDGEMENTS

Thanks go to my committee director, Dr. Meagan Karvonen, and committee members, Dr. Mary Jean Herzog and Dr. Casey Hurley for your assistance and support as I completed this long journey. Your feedback was an essential piece of this process. I could not have succeeded without your help.

My parents have always provided a solid foundation from which I have been able to soar. There is no adequate way to thank them for all they have given and continue to give. I have also been blessed with two fabulous children, Quinn and Kathryn, who make me smile every day. They have been willing to pitch in and pick up some of the slack as I have juggled working full-time and attending graduate school. I continue to be amazed by the love and support my family provides.

I also have to thank the friends who have gently pushed me to finish what I began. Nancy Risch has a voice that carries and sometimes I listened. Thankfully she was also willing to be a sounding board when I needed to talk things out. Tracy rode to class with me for two years. The long drive was more enjoyable when we were together. Thanks to you all!

TABLE OF CONTENTS

	Page
List of Tables.....	v
Abstract.....	vi
Introduction.....	1
Background.....	2
Problem Statement.....	7
Study and Purpose of Design.....	8
Significance of Study.....	9
Delimitations.....	12
Definition of Key Terms.....	13
Literature Review.....	15
Defining Transfer.....	15
Measures of Transfer Student Success.....	18
Grade Point Average.....	19
Persistence to Degree.....	21
Other Factors Related to Student Success.....	23
Institutional and State Level Influences on Student Success.....	25
Transfer Credit.....	25
Degree Major.....	29
Articulation Agreements.....	30
Summary.....	34
Design and Methodology.....	36
Research Questions.....	36
Study Design.....	38
Location and Study Context.....	38
Population and Sampling.....	38
Data Collection.....	40
Reliability and Validity.....	42
Data Analysis.....	43
Question One: The Relationship Between General Education Path and Persistence.....	44
Question Two: Impact of Degree Major on Relationship between Path and Persistence.....	44
Question Three: The Relationship Between Path and Credits Accumulated.....	45
Question Four: Impact of Major on Relationship Between Path and Credits Accumulated.....	45
Summary.....	46
Results.....	47
Description of the Sample.....	48

Data Analysis.....	49
Question One: The Relationship Between General Education Path and Persistence.....	49
Question Two: Impact of Degree Major on Relationship between Path and Persistence.....	49
Question Three: The Relationship Between Path and Credits Accumulated.....	52
Question Four: Impact of Major on Relationship Between Path and Credits Accumulated.....	52
Summary of Results.....	55
Discussion and Conclusion.....	57
Research Questions.....	59
Conclusions and Discussions of Findings.....	60
The Relationship between Path and Baccalaureate Degree Persistence.....	60
The Impact of Degree Major on the Relationship Between Path and Persistence.....	62
Relationship Between Path and Credit Accumulation.....	62
The Impact of Degree Major on the Relationship Between Pathway and Credits Accumulated.....	64
Recommendations.....	65
Recommendations for Practice.....	66
Recommendations for Research.....	68
Strengths, Delimitations, and Limitations of the Study.....	69
Conclusion.....	70
References.....	73
Appendix A: North Carolina Comprehensive Articulation Agreement.....	78

LIST OF TABLES

Table		Page
1.	Variables Collected from the Data Warehouse.....	41
2.	Baccalaureate Degree Completion by Major.....	50
3.	Impact of Degree Major on the Relationship Between General Education Path and Persistence.....	51
4.	Descriptive Statistics of the Impact of Degree Major on Relationship Between Pathway and Credits.....	53
5.	ANOVA of Impact Degree Major has upon Relationship Between Pathway and Credits	54
6.	T-test Analysis of Impact of Degree Major on the Relationship Between Path and Credits.....	55

ABSTRACT

THE RELATIONSHIP BETWEEN CREDIT ACCEPTANCE AND BACCALAUREATE GRADUATION PERSISTENCE FOR TRANSFER STUDENTS

Kimberly Tisdale Turk

Western Carolina University (May 2012)

Director: Dr. Meagan Karvonen

Articulation agreements were created to make transferring from a state-supported community college to a state-supported university a smoother process while reducing the higher education costs for the state. This ex-post facto study examined the relationship between the pathway North Carolina community college students used to complete the general education core and post-transfer outcomes. All of the 27,155 students included in this study completed at least 44 transferrable credit hours in the community college system, the equivalent of the general education core, although completion of the specific courses included in the core could not be established. Associate degree completers took elective hours beyond the general education core to complete an associate degree. The archival data used in this study included students who transferred from a North Carolina community college to a University of North Carolina institution between the years 2000 and 2006. In this study the general education core pathway did not statistically significantly impact baccalaureate degree persistence, but it did impact credits earned in the university. It took associate degree completers on average one credit hour more than non-completers to finish a baccalaureate degree. The interaction of general education

core pathway and degree major declared upon entrance to the university had a statistically significant impact upon credits accumulated in the university but not on degree persistence. Majoring in a social science degree significantly impacted the relationship between general education pathway and credit accumulation. Majoring in a business, education, science, mathematics, humanities/fine arts, or a career/technical degree did not statistically significantly impact credit accumulation. These results can be used by community college advisors, the universities accepting transfer students, and the governing boards of both higher education entities in North Carolina.

CHAPTER ONE

Introduction

Community colleges provide a conduit to higher education for everyone, including those seeking general education courses which can be used for transfer to a senior institution (Cohen & Brawer, 1996). Students seeking transfer encounter barriers, such as conflicting program requirements and acceptance of credits, because of inconsistencies between the programs at community colleges and universities (Lindstrom & Rasch, 2006). Students can complete a transfer-oriented associate degree or accumulate credits at a community college to complete the general education core required at a university. The general education core is defined by the university and in many states is described by an articulation agreement. Roksa and Keith (2008) found articulation agreements were one method a state could use to have an impact on the transfer process by protecting credits when students move between higher education institutions.

The North Carolina Comprehensive Articulation Agreement [NCCAA; University of North Carolina (UNC) & North Carolina Community College System (NCCCS), 2008], like similar state-wide articulation agreements, is designed to create a smooth transition into the UNC System for North Carolina community college students seeking a baccalaureate degree. The NCCAA addresses the transfer of credits between the institutions in the NCCCS and institutions of the UNC system. The transfer barriers analyzed by Lindstrom and Rasch (2006) existed due to the inconsistencies between the programs at community college and universities. Ideally these inconsistencies would be

addressed by the existence of a statewide articulation agreement, allowing transfer students to enter the university system academically on par with native students.

This study investigated the existence of a non-academic performance-based barrier, the student path to general education degree completion, on two baccalaureate degree persistence factors for students in the North Carolina higher education system: persistence to degree and total credits earned in order to complete a baccalaureate degree. Two paths students can use to complete the general education requirements include earning at least 44 transferable credit hours before transfer, which is the equivalent of the general education core, or completing a transfer-oriented associate degree before entering the university. Transfer students included in this study exited the NCCCS between 2000 and 2006 and transferred to an institution in the UNC System.

Previous studies have found distinct differences by degree major in student performance after transfer (Carlan & Byxbe, 2000). In light of that research, this study also examined whether the relationship of pathway used to complete the general education core, to persistence and credits earned as part of completing a baccalaureate degree varied based on degree major.

Background

States use community colleges as a way to increase higher education enrollment for underrepresented groups (Anderson, Sun, & Alfonso, 2006b). In addition to providing access to higher education, state policy makers use community colleges as a means to efficiently and effectively spend taxpayer funds allotted for higher education. However, the transfer process often includes the loss of credit which is wasteful (Carey, 2010) for both the students and the state if the credits are not effectively used by the

receiving institution. Providing access to higher education in a cost-effective means fits with Dougherty's (1994) state relative autonomy theory which says the state is concerned with keeping the costs of providing services down while maintaining these services.

Government officials are charged with acting in the best interest of the state even if their constituents have not requested action to be taken. A better educated populace with the state incurring as little expense as possible benefits the state. In this situation, Dougherty applied this principle to explain why legislatures concern themselves with the creation of articulation agreements to set policy related to transfer.

Statewide articulation agreements are designed to allow the community college to be a cost effective path to a baccalaureate degree (Barkley, 1993; Ignash, & Townsend, 2000; Karabel, 1986; Robertson & Frier, 1996), further reinforcing a state's ability to efficiently spend tax dollars on higher education. Roksa and Keith (2008) described articulation agreements as a means for reducing "the number of credits lost in the transfer process, which would in turn reduce time to degree and potentially enhance baccalaureate degree attainment" (p. 237). If the articulation agreement between the community college system and university system functions as designed, transfer students and the state benefit because of the reduced total cost of obtaining a baccalaureate degree. If the agreement is not working as designed, the institutional barriers associated with transfer would require students to invest more time to complete the baccalaureate degree, creating more expense for students and the state. The additional time and expense required for transfer students to complete a baccalaureate degree may also result in a lower rate of persistence, even when transfer student's academic abilities are equivalent to native students'.

According to Anderson, Sun, & Alfonso (2006a) “articulation agreements are the principal instruments to facilitate the transfer process” (p. 262). Articulation agreements define the rights and responsibilities of transfer students as well as the institutional guarantees afforded to transfer students. Anderson et al. found the existence of statewide articulation agreements did not increase the probability a student would transfer, even though articulation agreements were established to reduce transfer barriers. Roksa and Keith (2008) found state-wide articulation agreements also did not increase the probability a transfer student would complete a baccalaureate degree, did not decrease the time it took to complete a baccalaureate degree, and did not reduce the number of credits required to complete a baccalaureate degree as compared to states without an articulation agreement. The lack of a difference in transfer student success based on the existence of an articulation agreement could indicate articulation agreements do not function as predicted, or, in states that lack a state-wide articulation agreement, other agreements between community colleges and universities are fulfilling the role of an articulation agreement.

Studies have shown transfer students perform as well academically after transferring to a university as native university students after a semester of transfer shock. Transfer shock is defined as a temporary dip in GPA (Best & Gehring, 1993; Diaz, 1992; Glass & Harrington, 2002; Nolan & Hall, 1978) for one or two semesters after transferring to a university. Although transfer students’ academic performance is comparable to that of native students, their persistence to the baccalaureate degree lags behind native students (Doyle, 2006; Glass & Harrington, 2002; McCormick, 2003). Best and Gehring (1993) hypothesized the inconsistency between academic performance and

degree attainment was a result of external elements inherent in the transfer process that created barriers for transfer students that did not exist for native students. The external elements cited were institutionally based and included credit acceptance by the receiving institution, which may be related to degree major since each department can accept or reject credits earned at the community college. Historically, community colleges have borne the brunt of the transfer student baccalaureate attainment issue by being blamed for not preparing students for the university. Recently there has been more interest in examining the role universities play in the baccalaureate persistence issue since universities are the institutions that award transfer credits (Handel, 2010). Researchers have also found that university systems are less likely to have standardized course numbering systems or common requirements for the same degrees, resulting in a loss of credits during the transfer process (Laird, 2009).

Universities are expected to distinguish themselves from one another while accepting transfer students from across the state and then helping those transfer students seamlessly enter multiple curricula along with their native students. Lindstrom and Rasch (2003) found university expectations to have programs with innovative curricula and assessments of student learning were not in line with state expectations of collaboration with community colleges. For example, native university students begin taking major courses during the first two years of their studies, but transfer students do not have that same opportunity at the community college. The disconnect between a university's mission and the expectations of the articulation agreement can lead to barriers, such as additional course expectations for transfer students or non-acceptance of community college classes. Degrees can be organized in a fashion that allows freshman

and sophomore native students to take majors courses or courses that are prerequisites to majors courses while transfer students cannot access these courses until after transferring. The requirement to take majors courses or specific prerequisites before the junior year can create a barrier for transfer students if those courses were not available at the community college. The result is that transfer students who are limited to taking only general education courses at the community college may need more than four years to complete a baccalaureate degree (Hollingsworth, 2010). The loss of credits or additional course requirements can impede transfer student progress toward a baccalaureate degree. Since credit acceptance is determined by each university department rather than the admissions department, the use of credits transferred into the university can differ within each department even at the same university.

The lack of baccalaureate degree persistence for transfer students is not explained by transfer student academic performance. When student performance is measured by grade point average, transfer students perform as well as native students after the first semester at the university (Glass & Harrington, 2002; Nolan & Hall, 1978). Best and Gehring (1993) found students with 60 or more credits upon transfer performed academically as well as native students based on grade point average, but native students still graduated at a much higher rate (60%) than the community college transfer students (40%). Because of the disconnect between academic performance and persistence to degree, this study is focused on non-academic, performance-based factors to determine if degree persistence is affected by the number of credit hours transferred and degree major.

Problem Statement

Transfer students perform as well academically as native students based on grade point average but do not persist to the baccalaureate degree at the same rate as native students (Christie & Hutcheson, 2003; Dougherty, 1994; Glass & Harrington, 2002; Nolan & Hall, 1978). The NCCAA between the NCCCS and UNC system provides credit transfer protection to students who complete the general education core and students who complete a transfer-oriented associate degree. The NCCAA includes pre-major advising guides to assist transfer students in choosing general education and elective courses that will best meet the requirements of the degree major sought after transfer.

The general education core includes 44-48 transfer credit hours, allowing a student to enter the university in the middle of the sophomore year. A transfer-oriented associate degree includes 64-65 transfer credit hours and allows students to enter the university as a junior. The transfer-oriented associate degree includes elective hours in addition to the general education core. This study examined whether the NCCAA provided protection for the credits earned at the community college before transferring to the university system. If the credit hours are not protected during the transfer process, it can result in a failure to complete the baccalaureate degree or require the student to be enrolled more semesters and earn more credits in the completion of the baccalaureate degree.

This research study was designed to determine if there was a difference in degree persistence and total credits earned towards a baccalaureate's degree for students completing the general education requirements through the community college general education core or a community college transfer-oriented associate degree. Because both

groups of transfer students are protected by the articulation agreement between the NCCCS and the UNC system, a comparison of degree persistence and the total credits earned as part of completing a baccalaureate's degree provided information about the effectiveness of the NCCAA. Both student populations were analyzed to determine if degree major declared upon entrance to the university impacted persistence to degree and credits required to complete a baccalaureate degree.

Study Purpose and Design

This study examined the relationship between the path used to complete the general education core in the community college and baccalaureate degree persistence as well as credit accumulation for the students completing a baccalaureate degree. The impact of degree major on these relationships was also examined. This study investigated four research questions:

- 1) What was the impact of the student path used to complete the general education requirements at the community college on persistence to baccalaureate degree completion?
- 2) Did the relationship between the student path used to complete the community college general education requirements and persistence to degree completion vary by degree major at the university?
- 3) For those students who completed a baccalaureate degree, were there differences based on the student path used to complete the community college general education requirements in the number of credits accumulated in order to complete the baccalaureate?

- 4) For those students who completed a baccalaureate degree, did the relationship between the student path used to complete the community college general education requirements and the number of credits accumulated to complete a baccalaureate vary by degree major?

The two student populations studied completed the general education requirements for a baccalaureate degree using different paths: completing the equivalent of the community college general education core, a minimum of 44 transfer credit hours, or completing a transfer-oriented associate degree in the NCCCS. A transfer-oriented associate degree includes the general education core and elective credits. The NCCAA addresses requirements for pre-majors as a guide for transfer students seeking to use elective hours toward the degree major.

The interactions of degree major with the two main effects, the path to general education requirement completion and degree major, were also analyzed. The degree majors were classified into six categories including business, education, science, mathematics, humanities/fine arts, social science, and career/technical fields. These six categories were based on groupings of the pre-major agreements associated with the NCCAA.

Significance of Study

Previous studies have indicated transfer students perform as well as native students academically, based on grade point average, but fail to persist to the baccalaureate degree (Best & Gehring, 1993; Diaz, 1992; Glass & Harrington, 2002; Nolan & Hall, 1978). Community college minority students were less likely to complete a baccalaureate degree, and even when academic attainment was eliminated as a factor,

attending a community college negatively impacted career options (Pascarella & Terenzini, 2005). Best and Gehring (1993) theorized the inconsistency between academic performance and persistence to degree was a result of elements out the student's control, such as credit acceptance and counseling services, which created barriers for transfer students. The likelihood of a student attaining a baccalaureate degree increases with the number of credits that successfully transfer (McCormick & Carroll, 1997) except when students earn more than 60 credits at the community college (Roksa & Keith, 2008). When students earned more than 60 credits at the community college, it increased the total number of credits they earn in order to complete a baccalaureate degree since universities often have a limit above which credits are no longer accepted and because community college courses do not meet the requirements for junior and senior level courses. Carlan and Byxbe (2000) found transfer student performance at the university differed based on degree major, indicating the courses taken at the community college did not provide students seeking business and science degrees with an appropriate foundation.

Multiple student variables, such as academic background and socioeconomic status, impact transfer student success, but even when those factors are controlled for there is still a statistically significant difference in persistence between transfer students and native students (Dougherty, 1994). Doyle (2006) found credit acceptance was a key factor in transfer student success, but because transfer can be defined in many ways, statistics related to transfer success often include students who were not protected by the articulation agreement that existed for their higher education system. Examining baccalaureate degree persistence rates for community college transfer students who

completed the equivalent of either a general education core or associate degree and who therefore should have had their credits protected according to the NCCAA allowed the researcher to investigate if the number of credit hours transferred, a non-academic performance-based factor, affected baccalaureate degree completion.

Degree requirements differ based on the major, and each major is allowed to have course requirements beyond those stated in the NCCAA. Carlan and Byxbe (2000) collected data that indicated transfer student success was impacted by degree major. The extent and character of the impact was not investigated. In an effort to explore this aspect of transfer success, the current study grouped students based on degree major to examine the influence of degree major upon degree persistence and credits accumulated to complete a baccalaureate degree.

The findings from the current study can be used to help potential transfer students within different majors determine the value of completing the general education core or a transfer-oriented associate degree in the community college system. These data can also be used to help academic advisors provide transfer students with guidance about the optimal time to transfer during different programs of study at the community college. These data also provide evidence about whether the credit protection goal of the NCCAA is being met. Finally, this study provided information that can be used by institutions wishing to investigate the existence of non-academic, non-performance-based transfer barriers within the institution, such as the acceptance of credits, which can be used to improve the transfer process.

Delimitations

This study only included students transferring from the NCCCS to the UNC System who earned at least 44 credit hours between 2000 and 2006 at a North Carolina Community College. The North Carolina Articulation Agreement between the NCCCS and UNC System was established in 1997, so students transferring from the NCCCS in 2000 would have been covered by the articulation agreement. The sample was limited to students who transferred from the NCCCS before the end of 2006. Data were compiled in 2010, providing all the students included in the study with four years to complete a baccalaureate degree. The study results will be applicable to students transferring from the NCCCS to the UNC System. Student variables, such as socioeconomic status and GPA, were unavailable. These variable were also outside the scope of this research study.

Students enrolled in community college associate in arts and associate in science programs completing at least 44 transferable credit hours have completed the equivalent of the general education core in hours, but it is not possible to determine if these students met the general education core requirements as outlined in the NCCAA. The pre-major agreements associated with the NCCAA were created with input from both community college and university faculty and administrators based on student interest and serve only as an advising tool. New pre-majors have been added annually since 1997. Since pre-major agreements continue to be added based on need, the students included in this study might not have been advised based on a pre-major agreement. Students are not required to follow the pre-majors as outlined and can change majors. The pre-majors included in

the NCCAA are designed to be used as an advising tool and do not provide any additional credit protection to students.

The academic advisement process differs at each of the 58 community colleges in the NCCCS. The community colleges and universities participating in the NCCAA interpret the agreement and apply it to their own situation. It is the responsibility of each community college to interpret the agreement, advise students, and offer courses which meet the requirements of the North Carolina Articulation Agreement. Each of the sixteen universities in the UNC System, and in some cases departments within the university, has the responsibility to apply the North Carolina Articulation Agreement when accepting credits. Although advising impacts transfer, it will not be an element included in this research study.

Definition of Key Terms

For the purposes of this study a *transfer student* is a university student who has used credit completed in a community college associate in arts or associate in science program in the pursuit of a baccalaureate degree.

The *North Carolina Comprehensive Articulation Agreement* provides credit transfer protection and describes student responsibilities for students transferring between North Carolina Community Colleges and the UNC institutions. The protections afforded by the articulation agreement are based on the completion of the general education core or a transfer-oriented associate degree. The general education core is a defined set of courses described in the NCCAA which are designed to meet the general education requirements at all UNC institutions. In addition to the 44-48 hour general education core there are 20-21 elective credit hours required to complete a transfer-oriented

associate degree (UNC & NCCCS, 2008). Completion of a transfer-oriented associate degree was one path used to complete the general education core in this study.

For the purposes of this study *core completers* finished the equivalent of the *general education core*, which is defined as completing at least 44 credit hours but not graduating with a transfer-oriented associate degree. The NCCAA defines the general education core as including a specific set of courses equaling 44-48 credit hours (Appendix A). Students who have completed at least 44 credit hours without completing a transfer-oriented associate degree were included to increase the study sample size. The completion of at least 44 credit hours as defined above was the second way the general education core was completed in this study.

Degree major is the field of study students declared upon entrance to the university. All majors were grouped into seven degree majors, business, education, science, mathematics, humanities/fine arts, social sciences, and technical/career degree. *Native students* attended the university without bringing in transfer credits.

CHAPTER TWO

Literature Review

Researchers have approached transfer student success research from many angles, with much of the literature focused on measures of student performance. This literature review examines factors, including grade point average, transfer of credits, and degree major, that influence transfer student success, which is ultimately persistence to the baccalaureate degree. Articulation agreements will be defined based on existing literature and discussed based on the impact these agreements have upon transfer student success.

Defining Transfer

The process of transferring from one institution of higher learning to another differs for each student, but there are some common elements. McCormick (2003) identified typical transfer as a one-way transfer where students complete coursework at one institution and use that credit to complete a degree at a second institution. Swirling occurs when a student goes back and forth between two institutions, accruing credits at both over time. Students double dip when they attend two institutions at the same time. Students experience rebound enrollment when they bounce between multiple institutions before staying at one institution to graduate. When students are concurrently enrolled, they are attending multiple institutions at the same time.

Some students experimentally enroll in a second institution, called trial enrollment, to test out the institution when considering transfer. Students may enroll in another institution to accumulate additional credits to either supplement or accelerate

their program. Attending multiple institutions leads to using credits from these institutions as part of consolidated enrollment where the credits used for graduation originate from multiple institutions. It is also possible to have independent enrollment where a student is enrolled but not seeking to transfer the credit being earned to another institution for the purposes of completing a degree. No matter which pattern a student follows or the reason for transfer, the result is usually a degree based on credits from other institutions being accepted by the degree-granting higher education institution. The complex and diverse transfer patterns as defined by McCormick make the process of defining a transfer student population difficult for researchers.

Anderson et al. (2006a) defined transfer from the university perspective looking back at the originating institution for transfer students. This allowed the researchers to define transfer as involving students who began their higher education path at a public community college and subsequently enrolled at any four-year college or university. This definition only included students who successfully transferred to a four-year institution and excluded all students who intended to transfer but did not do so.

In reviewing the problems associated with using transfer as a measurement of community college success, Townsend (2002) reviewed studies that used enrollment in a transfer program to determine the number of potential transfer students. Townsend pointed out the “unstated assumption is that only students in transfer programs will transfer” (p. 15) even though students in applied associate degree programs often intend to transfer to a four-year college. This method would not have included students who transferred from a two-year college to a four-year institution if they were enrolled in a non-transfer-oriented degree at the community college. This leaves researchers trying to

identify who plans to transfer in order to determine the actual rate of successful transfer. If only students in transfer programs are counted as potential transfer students and everyone who has transferred is counted as part of determining the percentage of actual transfer that has taken place, researchers will have counted students who earned non-transfer degrees when those students were not counted in the potential transfer group. This would result in an artificial inflation in the percentage of transfer-intending students who appeared to successfully transfer. Townsend (2002) noted that if student transfer research is done at a state level using public institution data, then information related to transferring to private institutions is often not included. The exclusion of data from students enrolling in private institutions may skew the transfer percentages.

Another difficulty in determining a definition for transfer is growth in dual credit programs. Dual credit programs allow high school students to take college courses and receive both high school and college credit (Townsend, 2002). Early admission programs are similar to dual enrollment because they allow students to earn college credit while in high school, often in the summer. It is possible for high school students to earn enough credits to equate to a semester or more of college, which can equate to the same number of credits as a traditional transfer student. It can be difficult to separate the dual enrollment population from the transfer population when researching transfer students since both are entering the university with credits and may therefore have advanced standing.

Doyle (2006) defined transfer rates as “clearly understandable as the ratio between the number of students who leave a two-year for a four-year institution divided by the total number of students who wanted to obtain the baccalaureate” (p.56). This

definition may include students in both the transfer and non-transfer tracks depending upon how intent to obtain a baccalaureate is defined. Many researchers continue to use enrollment in a transfer program as the declaration of baccalaureate degree attainment intentions rather than enrollment in a university. The decision to only include students in pre-baccalaureate programs is due to the difficulties in determining transfer intention, especially since that decision can change as a student progresses through a non-transfer designed program.

Because transfer has been defined in multiple ways, including declared intent, community college program enrollment, or attendance at a university, it has been difficult to uniformly measure transfer (Rifkin, 1996). Each transfer definition would necessitate using different populations and calculations to determine a transfer rate. The different methods of calculation make it difficult to compare results from different research studies. The inability to compare results across transfer success studies has made it difficult to discern the validity of these studies. For the purpose of this study transfer was defined based on enrollment in the university after the completion of the equivalent of a general education core. This narrow definition of transfer suits this research study since the relationship between the pathway used to complete the general education core and baccalaureate persistence and credit accumulation is being examined.

Measures of Transfer Student Success

Multiple measures of transfer success, including grade point average, persistence to degree, student demographics, college attendance patterns, and academic probation, have been documented in the literature. These measures have been used to make

predictions about student success but do not fully explain differences found in transfer student success.

Grade Point Average

Transfer student performance has been measured using grades, generally student grade point average (GPA). Community college students were well prepared to compete academically with native students based on seventeen studies reviewed by Nolan and Hall (1978). Nolan and Hall found that students experienced a quarter of a letter grade GPA drop when they transferred, but once these students completed 30 semester hours after transfer, their GPA was nearly identical to native students. The students in these studies experienced what the authors referred to as transfer shock, but they overcame this reduction in their GPA and performed better than they had at the community college by the time they graduated.

Glass and Harrington (2002) found transfer shock was more likely to occur if students had a GPA of 2.5 or less before transfer. Transfer shock was not experienced by native students when they entered their degree major coursework. In 79% of the 62 studies reviewed by Diaz (1992), transfer shock was reported. In 67% of the studies in which transfer shock existed, Diaz found that students with lower GPAs at the time of transfer were more likely to experience a larger GPA drop after transfer. Carlan and Byxbe (2000) found there was a two-thirds of a point increase in post transfer GPA for every one point increase in the two year institution GPA. These studies demonstrate the positive relationship between GPA at the two-year institution and GPA at the four year institution.

The community college experience has been shown to influence transfer shock and GPA at the university. Diaz (1992) also found that students who were enrolled longer in the community college were the least likely to experience a large drop in GPA, but also that the GPA difference between students who stayed at the community college for two years and those who stayed only one was so small it should not be used as a factor for deciding when to transfer. Glass and Harrington (2002) found transfer students perform academically as well or better than native students based on having GPAs at the time of graduation that were at least as high as those of the native students.

Standardized testing is often used as an indicator of college readiness. Carlan and Byxbe (2000) used performance on standardized tests to predict student performance, measured by GPA, at the four-year institution. Carlan and Byxbe found community college students did not perform as well as native students on standardized tests designed to predict college preparedness, but they then earned grades in their lower division work at the community college that were similar to those of students enrolled in lower division courses at the university. Although the students studied by Carlan and Byxbe experienced transfer shock when they entered the university, they were earning GPAs comparable to native students by graduation. This comparable academic performance at the university meant the lower standardized test scores for community college students were not an accurate predictor of academic ability.

The literature related to transfer student GPA indicates transfer shock is a temporary condition and has a more extreme impact on students who had lower GPAs before transfer (Glass & Harrington, 2002). There is also a positive correlation between GPA at the community college and GPA at the university after transfer (Carlan & Byxbe,

2000). The literature also indicates transfer students have similar GPAs as native students by graduation (Nolan & Hall, 1978).

Persistence to Degree

In light of the similar GPAs of transfer and native students there should not be any difference in baccalaureate degree completion. Research, however, indicates that baccalaureate persistence is lower for transfer students. The research by McCormick (2003) as well as Christie and Hutcheson (2003) found transfer students did not persist to graduation at the same rate as native students even though other research studies have found transfer students have similar GPAs as native students (Best & Gehring, 1993; Diaz, 1992; Glass & Harrington, 2002; Nolan & Hall, 1978). Retention rates declined for both transfer and native students as they moved towards graduation but retention rates for transfer students showed the greatest decline in the Glass and Harrington study, with 54.7% of the transfer students and 87.8% of the native students completing a baccalaureate degree. It was noted that “If both transfer and native students make it through their junior years they will, most likely, graduate by the end of the next fall semester” (Glass & Harrington, 2002, pp. 426-427).

Although the completion of the junior year appears to be key, students beginning their baccalaureate degree at a community college were significantly less likely to persist to degree completion than students who begin at a four-year institution, completing one-half a year less education than students who began at a university (Dougherty, 1994). When McCormick (2003) looked only at the persistence of two-year college students who enrolled in a four-year institution, the data indicated that 66% of the transfer students persisted to complete a baccalaureate degree. “The net effect of enrolling at a

two-year college instead of a four-year college [is that it] reduces a student's probability of obtaining a baccalaureate degree" (Christie & Hutcheson, 2003, p. 2). Enrolling at a two-year higher education institution resulted in an almost 10% decrease in persistence to baccalaureate degree completion, even as long as ten years after high school graduation.

Attending multiple institutions, whether one of these institutions is a community college or not, appears to impact baccalaureate degree persistence. McCormick (2003) found 76% of students who attended only one higher education institution graduated or were still enrolled four years after beginning the freshman year. Only 65% of students enrolled in two or more institutions graduated or were still enrolled four years after beginning the freshman year. McCormick's research included all students who attended more than one higher education institution, not just students attending a community college and a baccalaureate institution. It is important to note that McCormick found attendance at more than one institution did not always equal transfer. Some of the students in the study attended more than one institution at the same time without leaving the original institution of enrollment.

Diaz (1992) found transfer students who remained enrolled at the four-year institution long enough to recover from transfer shock performed as well as natives in terms of GPA and persisted to graduation over 70% of the time. Although this persistence rate is lower than the rate among native students, it led Diaz to recommend that four-year institutions need to encourage transfer students to stay enrolled despite the drop in GPA because the students that persisted tended to complete a baccalaureate degree. The Glass and Harrington (2002) research indicated completion of the junior year was critical to both transfer and native students since all of the students in the study who

completed the junior year graduated. The authors suggested this finding may be related to the fact that the junior year is often when students begin to encounter courses in the degree major.

Dougherty (1994) noted that although there are student characteristics that make a difference in persistence, such as socioeconomic status, academic background, and educational aspirations, there is still a statistically significant gap in persistence even when those student characteristics are controlled for in the data analysis. This gap indicated there are factors outside the students' control, such as credit acceptance and transfer policies, that influence persistence. Best and Gehring (1993) hypothesized that lower persistence for transfer students was related to institutional barriers, including credit acceptance and degree major, rather than academic performance.

Other Factors Related to Student Success

In addition to GPA and persistence there are other factors, such as student demographics, college attendance patterns, and academic probation, that have been researched in relation to student success. Hughes and Graham (1992) organized student variables into "three broad categories: demographic or personal characteristics; previous academic experiences and preparation; and items measuring perceptions of the faculty/student interactions and the experiences with academic advising assistance" (p. 38). The researchers placed transfer students into two groups, those with a GPA of 2.0 and above and those with a GPA below 2.0, after the first semester at the four-year institution. The only variable where a statistically significant difference was found dealt with class attendance at the community college. "As expected, those who reported they

missed five or more classes per session while at the community college were less likely to achieve satisfactory performance at the university” (p. 40).

Christie and Hutcheson (2003) as well as Anderson et al. (2006a) found students working while enrolled and students receiving financial aid or those dependent on parental income were more likely to transfer. Although female students account for the majority of enrollment in higher education, they are equally likely to transfer as males according to Anderson et al. (2006a). Community college students are more likely to have interrupted enrollment or only attend on a part-time basis, but even when these enrollment patterns are controlled, there is still a gap in persistence between students who began at the community college and native university students (Alfonso, 2006).

Graham and Dallum (1986) used student academic probation to measure success. Native students constituted more than 70% of the student population but less than 60% of the students on academic probation in each of the semesters studied. Although Graham and Dallum found transfer students were more likely to end up on academic probation, “community college transfer students were no more likely to be placed on academic probation than were other transfer students from a variety of institutions” (p. 23). Community college transfer students were at least 28% of the transfer student population but no more than 31% of the transfer student population placed on academic probation. These data led the researchers to propose that the community college transfer students were no less prepared than transfer students from four-year higher education institutions. The use of academic probation as a performance measure was limited in scope because it failed to account for students who withdrew before academic probation became necessary

and students who failed to graduate at the same time as native students but maintained a GPA high enough to avoid academic probation.

In summary, transfer students perform academically as well as native students based on GPA, but they do not persist to degree at the same rate as native students. The literature related to transfer student success suggests that although GPA and student characteristics such as socioeconomic status are factors in transfer student persistence, they alone do not account for the lower rate of baccalaureate degree attainment for transfer students as compared to native students (Alfonso, 2006; Christie & Hutcheson, 2003; Dougherty, 1987; 1992; 1994; Glass & Harrington, 2002; Nolan & Hall, 1978).

Institutional and State Level Influences on Student Success

In addition to student characteristics there are institutional and state-level influences on student success including the number of transfer credits that enter the university, the degree major, and the existence of a state-wide articulation agreement. These institutional and state-level influences have been shown to have an impact on student success even when individual student characteristics are accounted for.

Transfer Credit

Persistence to a baccalaureate degree is impacted by obstacles involved in the process of transferring, an activity a native student does not have to complete (Dougherty, 1994). Students transferring between institutions must apply to and be accepted by a new institution, even though receiving institutions have demonstrated a preference to admit freshmen over transfer students. Once transfer students are accepted, they may need to seek new or additional financial assistance. Because Doyle (2006) found the six-year baccalaureate degree completion rate for community college transfer

students is much lower than the rate for native four-year institution students, he recommended “baccalaureate degree completion may have more to do with issues outside of their control than their own choices. Few analyses have looked at the acceptance of credit hours in the target institution, which turns out to be key to students’ success – or lack of it” (p. 57). Best and Gehring (1993) also suggested future research was needed to investigate credit hours to determine if native students were progressing toward graduation faster than transfer students as a potential explanation for the higher completion rate for native students.

Other research has supported the need to examine whether a loss of credits during the transfer process impacted students’ success. Dougherty (1994) found transfer students lost credits as part of the acceptance process. The loss of credit often occurred when the university curriculum and standards were not matched with the community college courses. Similar evidence was found by Dougherty (1987), who determined that over 10% of transfer students participating in national surveys lost a semester or more of credit during the transfer process. Native students also do not lose credit when they receive a D in a course while transfer students often find these courses do not transfer into the university, requiring them to replace these credits (Dougherty, 1987; 1994). Doyle (2006) found that of the transfer students who had all of their credits accepted, 82% graduated within six years, similar to native student graduation rates. Forty-two percent of students who had only some of their credits accepted graduated within six years while 36% were still enrolled and 19% were no longer enrolled.

The number of credits a transfer student completes at the community college may not equal the number of credits the receiving institution accepts or how those credits are

applied, which can impact student academic standing after transfer. Transfer students reported that credits transferred to the university were not applied to program major (Dougherty, 1992). For 11% of students in this study that included nine urban universities from across the United States, 10 or more credits were not counted toward the degree major even though the credits were accepted by the university. Not using those 10 or more credits is the equivalent of losing a semester of transfer credit.

Articulation agreements are designed to protect credits when students transfer, but Carlan and Byxbe (2000) found that even though states stress the importance of completing an associate degree before transfer, and often base articulation agreements on the completion of an associate degree, 67% of the students in the study transferred without completing an associate degree. The attainment of an associate degree did not have a significant impact on academic performance after transfer, implying a requirement to complete an associate degree was unnecessary. This also means the credit protection provided by the articulation agreement and the additional credits required to complete an associate degree did not improve persistence.

Best and Gehring (1993) found “community college students who transfer with 60 or more credits perform as well on their GPAs as students who began their baccalaureate career at the university” (p. 5). The completion of 60 or more credits at the community college is equivalent to the hours required to complete an associate degree. The Best and Gehring study showed that community college transfer students completing the equivalent of an associate degree at the community college received higher GPAs, had higher graduation rates, and had lower dismissal rates than those who transferred without completing two years of coursework. Students transferring in as juniors had a 40%

chance of graduating with a baccalaureate degree as compared to 31% of transfer students without a degree. Since students with 60 or more credits upon transfer in the Best and Gehring study were significantly more likely to graduate with a baccalaureate degree than students who transferred with fewer than 60 credits, which is the equivalent of an associate degree. These findings conflict with the Carlan and Byxbe (2000) study that found the completion of an associate degree did not significantly impact academic performance after transfer.

Although students transferring after completing the equivalent of an associate degree had higher GPAs and higher graduation rates than students without an associate degree in the Best and Gehring study, those rates were still below native students. Native four-year college students had a 60% chance of graduating with a baccalaureate degree, a much higher rate than the community college transfer juniors. Best and Gehring hypothesized that “some environmental conditions affected transfer students adversely, causing them to stop out or proceed toward graduation at a slower rate than native students” (p.6).

These studies demonstrate that credit acceptance has a bearing on transfer student success at the baccalaureate institution, but the strength of that relationship is still unclear. The importance of credit acceptance by the university is an element of transfer that needs to be studied to develop a complete picture of the transfer process and persistence to baccalaureate degree completion. One of the difficulties presented by this literature is determining how credits are being applied since credits can be accepted by the university but not applied by the program in which the degree is being sought.

Degree Major

When a university accepts a transfer student, the credits being brought to the university are first reviewed by admissions and then evaluated by the program in which the student registers. Although transfer students are in control of the major they elect when they transfer they are not in control of how each degree program within the university will apply the credits that have earned at the community college. Not only does credit acceptance differ for each major but student performance also varies. The performance of transfer students as compared to native students differed with the major of the baccalaureate degree being attained in research done by Carlan and Byxbe (2000) who also found that a student's lower division GPA significantly impacted success. Transfer students in business and science degrees were not as well prepared for the university even though their community college performance was similar to students in other majors based on GPA. Transfer students entering business and science programs had substantially lower senior institution GPAs than their native counterparts and experienced significant transfer shock. Transfer students majoring in education or psychology outperformed transfer students in other degree programs. Cejda, Kaylor, and Rewey (2010) found that even though there was little variation in the pre-transfer GPA, there was significant GPA difference after transfer in the different degree majors researched. These results support previous data indicating that academic performance of transfer students varied based on the degree major. Differences in post-transfer GPA based on degree major indicate a need to determine if there is also a difference in post-transfer baccalaureate degree persistence based on degree major.

Articulation Agreements

Articulation agreements are designed to reduce the expenses for the state, reduce program duplication, improve academic standards, and provide opportunities for students to pursue higher education degrees (Robertson & Frier, 1996). Articulation agreements generally focus on the transfer of credits earned as a unit, such a degree or common core of general education classes (Ignash & Townsend, 2000; Robertson & Frier, 1996; Roksa & Keith, 2008). Formal, state-wide articulation agreements allow the community colleges and universities with a state's higher education system to facilitate transfer in an efficient manner (Anderson et al., 2006a; Rifkin, 1996). Every state in the United States now has some way to coordinate higher education to efficiently appropriate funds (Robertson, 1996) although this is not always done using state-wide articulation agreements. Articulation agreements are only considered state-wide if there is "mandated transferability upon completion of common core requirements and/or defined number of credits," (Anderson et al., 2006a, p. 273) as opposed to agreements that cover a limited number of programs.

Transfer students and advisors can use articulation agreements as a guide about the appropriate transfer courses to complete a degree and transition to a four-year institution. Carlan and Byxbe (2000) found many states were encouraging transfer students to earn the associate degree before transferring although most transfer students in their study did not complete an associate degree. Lindstrom and Rasch (2006) agreed that students transferring before they complete an associate degree complicates the articulation process because articulation agreements are designed to protect students who complete a degree or a unit of courses.

Dougherty's (1994) state relative autonomy theory views articulation agreements as a government means to keep access to baccalaureate degrees an option at a reduced cost to the state. Dougherty's theory is based on the belief that government officials act for the benefit of the government, even if private interest groups and citizens have not pushed for legislation. Because community colleges are low-cost higher education providers, the government saves funding if the articulation agreement creates a seamless transfer from the community college to the university (Anderson et al, 2006b; Barkley, 1993; Dougherty & Kienzl, 2006; Ignash & Townsend, 2000; Karabel, 1986; Robertson & Frier, 1996). If the articulation agreement is not seamless and students repeat credits or remain in college longer, the state ends up expending more funds than expected to educate transfer students.

Roksa and Keith (2008) defined articulation agreements as being specifically designed to prevent the loss of credits when students transfer. Based on an examination of articulation policies from 30 states, Roksa and Keith determined "the main purpose of the policy is to ease the process for students who have already decided to transfer" (pp. 237). An articulation agreement benefits students and the state if it creates "a coordinated system of higher education, which prevents duplication, repetition of courses, and additional costs" (pp. 242-243). Articulation agreements are therefore intended to improve transfer student performance by easing the transition from the community college system to the university system.

Articulation agreements were created to improve the transfer process for the students and reduce costs to the state, yet "students who enroll in states with mandatory articulation agreements do not experience an increased probability of transferring"

(Anderson et al., 2006a, pp. 265). Articulation agreements fail to improve transfer success when there are barriers to transfer which can happen at various points during the transfer process including completing a satisfactory number of transfer courses, transitioning to the four-year institution, and completing the baccalaureate's degree requirements (Doyle, 2006). If an articulation agreement is functioning as the state intends, students will persist to baccalaureate degree completion after transfer, and the state will save funds when the university accepts transfer credits towards the baccalaureate degree.

When comparing states without articulation agreements to those with articulation agreements, Roksa and Keith (2008) found the existence of articulation agreements did not improve baccalaureate degree attainment after transfer, did not decrease the time necessary to complete a baccalaureate degree, and did not make a difference in the number of credits earned to complete a baccalaureate degree. In states with an articulation agreement, 61% of the students transferring to a four-year institution completed a baccalaureate degree as compared to 57% in states without an articulation agreement. Transfer students took on average 5.5 years to complete a baccalaureate degree whether or not they were in a state with an articulation agreement. There was no statistically significant difference in the number of credits earned while completing the baccalaureate degree ($M = 140$ credits) in states without articulation agreements compared to states with an articulation agreement ($M = 142$ credits). Students who completed more than 60 hours at the community college level, which is the credit hour equivalent of an associate degree, accrued more total credits in order to complete a baccalaureate degree in states with an articulation agreement. This finding implies that

receiving institutions in states with an articulation agreement are more likely to require transfer students to take additional hours to complete a baccalaureate degree or accepted fewer credit hours towards the baccalaureate degree. Roksa and Keith determined this meant that statewide articulation policies reduced the flexibility an institution had when accepting credit because the process had been standardized. Institutions not operating under a state-wide articulation agreement can make bilateral transfer agreements. Bilateral agreements can be more focused on individual institutions and programs, reducing a loss of credits for the students covered by the agreement.

Universities can find it difficult to make a state-wide articulation agreement work with the university programming because universities are supposed to provide unique curricula that distinguishes them from other universities while still collaborating with an extensive array of community college programs (Lindstrom & Rasch, 2006). These researchers found native students were taking professional courses during their first two years while community college students did not, creating a transfer barrier that increased the time required to complete a baccalaureate degree. The process of transfer was also being compromised as a consequence of “curriculum revisions at the four-year level” (Lindstrom & Rasch, 2006, pp. 21). Inconsistencies between four-year programs and community college programs, even when state-wide articulations exist, play a role in creating barriers in the transfer process.

Data from a national survey reviewed by Dougherty (1992) showed that students beginning their pursuit of a baccalaureate degree at a four-year institution have a 70% chance of completing a baccalaureate degree while students entering a two-year institution first have a 26% chance of completing a baccalaureate degree, even when

students variables are controlled. The lack of persistence to degree completion for community college entrants cannot be solely explained by differences in student characteristics, leading to the possibility that institutional requirements are partially responsible for the difference in persistence for transfer students as compared to native students (Christie & Hutcheson, 2003). Transfer student graduation rate depended highly on the transfer of credits (Doyle, 2006), implying that persistence to graduation is affected by institutional and state level policies, which are often defined by articulation agreements that are outside the control of transfer students. Even though articulation agreements are designed to protect credits when a student transfers, there was no statistical difference in baccalaureate degree attainment, time to degree completion, or credits required to complete a baccalaureate degree in states that have an articulation agreement as compared to states without an articulation agreement (Roksa and Keith, 2008).

Summary

This literature review supports the view that community college transfer students are academically prepared to perform as well as native students after transfer but do not complete baccalaureate degrees at the same rate. Success after transfer may have more to do with university acceptance into the major and the protection of credits during the transfer process (Dougherty & Kienzl, 2006) than the students themselves, if the students have a successful academic record at the community college. The discrepancy between academic ability and persistence to degree places a greater burden on higher education institutions to work together to improve transfer student opportunities and therefore increase graduation rates. The literature indicates there is a gap in the research

surrounding the relationship between transfer of credits and baccalaureate degree completion. For students that do complete a baccalaureate degree, the impact of the general education pathway can be evaluated by examining the credits required in the university to complete the baccalaureate. Additionally there has been little research related to the impact degree major has upon the relationships between pathway and baccalaureate persistence and the credits required to complete that baccalaureate degree. If transfer students perform as well as native students in terms of GPA, they should have similar graduation rates, unless there are non-GPA based factors impeding progression to baccalaureate degree attainment.

CHAPTER THREE

Design and Methodology

This research study investigated the relationship between the path North Carolina community college students used to complete the general education requirements, completion of at least 44 credit hours or associate degree completion, and baccalaureate degree persistence and credits earned as part of completing a baccalaureate degree. The impact of degree major upon baccalaureate degree completion and credit accumulation was also investigated. North Carolina Community College transfer students having completed the minimum credit hours required to complete the general education requirements for a baccalaureate degree were selected from a state-level data warehouse for inclusion in this causal-comparative study.

Research Questions

This study focused on four research questions to determine if the path of general education requirement completion and degree major effect baccalaureate degree persistence and credit accumulation. The two student samples differ in the path by which they completed their general education requirement, completing the equivalent of the general education core at the community college or completing the equivalent of an associate degree at the community college.

- 1) What was the impact of the student path used to complete the general education requirements at the community college on persistence to baccalaureate degree completion?

- 2) Did the relationship between the student path used to complete the community college general education requirements and persistence to degree completion vary by degree major at the university?
- 3) For those students who completed a baccalaureate degree, did differences in the number of credits accumulated in order to complete the baccalaureate exist based on the student path used to complete the community college general education requirements?
- 4) For those students who completed a baccalaureate degree, did the relationship between the student path used to complete the community college general education requirements and the number of credits accumulated to complete a baccalaureate vary by degree major?

Study Design

This research used an ex post facto causal-comparative design, to look for differences that already existed between the two research samples (Fraenkel & Wallen, 2006). Because the independent variables, path to completion of the general education requirements, and degree major cannot be manipulated, it is not possible to use an experimental design to answer the research questions. The archival data for this study were retrieved from a state-level data warehouse maintained by the University of North Carolina General Administration. The researcher studied whether the path to completion of the general education requirement and degree major impacted baccalaureate degree persistence. For students that did complete a baccalaureate degree, the researcher also examined whether there was a difference in the number of credits accumulated in order to

complete the baccalaureate degree based on the path to completion of the general education core and degree major.

Location and Study Context

This study only included students transferring from the North Carolina Community College System (NCCCS) to the University of North Carolina System (UNC). The NCCCS consists of 58 community colleges with independent governing boards. The UNC System consists of 16 universities with independent governing boards. Each system has a central office and a state level governing board responsible for oversight and auditing. North Carolina has had a comprehensive articulation agreement defining the rights and responsibilities of transfer students since 1997 (UNC & NCCCS, 2008; see Appendix A). This agreement defines the types and number of credit hours that students must finish in order to complete a general education core and a transfer-oriented associate degree. The comprehensive articulation agreement also defines the responsibilities of the receiving institutions, which are required to accept the general education core or associate degree as a unit of hours and waive entering transfer students from taking additional general education hours. Transfer students must still meet the entrance requirements of their desired program major. Degree major entrance requirements may include specific coursework beyond the general education requirements.

Population and Sampling

This study included 27,155 community college transfer students seeking a baccalaureate degree at one of the 16 universities in the University of North Carolina System. Sample demographics are provided in more detail in chapter four. The sample

was split into two groups based on the path to completion of the general education requirements. One group included 13,861 students transferring from the NCCCS to the UNC System after completing at least 44 transfer credit hours that counted toward either an Associate in Arts or Associate in Science degree without completing a degree. Students completing at least 44 credit hours have accumulated the credit hours required for the general education core as defined by the NCCAA but may not have taken the courses outlined in the agreement. The general education core is a protected block of 44-48 hours that, according to the North Carolina Articulation Agreement, are to be accepted as a whole. Students with at least 44 credit hours should transfer into the UNC System as second semester sophomores and may have met the general education core requirements.

The second sample included 13,294 transfer students completing either an Associate of Arts or Associate of Science degree. The Associate of Arts and Associate of Science degrees require 64-65 credit hours that are considered a protected block of hours under the North Carolina Articulation Agreement. The Associate of Arts and Associate of Science degrees include a general education core and elective hours. Students completing either an Associate of Arts or Associate of Science degree should transfer into the UNC System as juniors.

The students included in this study transferred out of the community college system between 2000 and 2006. The NCCAA was established in 1997, so students included in this study exited the North Carolina Community College system under the articulation agreement. Students leaving the community college system need at least two years in the university system to complete the baccalaureate degree. The last students included in the study left the community college system in 2006. The data file used for

the study was compiled in 2010, giving these students up to four years to complete a baccalaureate degree after transfer.

Data Collection

The University of North Carolina System maintains an extensive data warehouse, which is used to produce an annual transfer performance report. The existence of the data warehouse as well as the continuing relationship between the North Carolina Community College System and University of North Carolina System allowed the researcher to use data from both systems that had been compiled by the University of North Carolina System to create a student data profile for each transfer student that completed at least 44 credit hours in an Associate of Arts or Associate of Science program at a North Carolina community college between the years 2000 and 2006 and then enrolled in a University of North Carolina institution. Table 1 shows the variables collected from the data warehouse. Some of these variables were not factors in this research study.

Table 1

Variables Collected from the Data Warehouse

Variable	Variable Description
Sex	Students self-identify as male or female.
Community college attended	Which of the 58 Community Colleges in the NCCCS from which the included students completed transfer credit hours
Community college degree	The community college degree indicates whether the students completed transfer credit hours as part of an Associate of Arts or Associate of Science program.
Transfer hours	The transfer hours completed was reported for students who earned at least 44 credit hours but did not complete an associate degree. For associate degree completers transfer hours were not reported.
University attended	Which of the 16 Universities in the UNC System the transfer attended.
Degree major	Degree major was determined at the point in which the transfer student enrolled in the university. Degrees were grouped by the researcher as business, education, science, mathematics, humanities/fine arts, social science and career/technical.
Credits earned in the university system	Total number of credits accumulated while attending the university.
Baccalaureate degree earned	Students are coded as baccalaureate degree completers or non-completers.

Reliability and Validity

As is characteristic of a causal-comparative study, the two groups were not randomly formed but were based on the path used to complete the general education requirements. Because students picked the method used to complete the general education core in the community college and degree major upon entrance to the university, it was not possible to manipulate the independent variables, path to completion of general education requirements, and degree major, making this is an ex post facto research study (Fraenkel & Wallen, 2006). Covariates such as ethnicity, GPA, and socioeconomic status were not provided and could not be included in this study as control variables.

The student data maintained by the University of North Carolina System was provided by the individual higher education institutions in both the North Carolina Community College System and University of North Carolina System. The reliability of the data was based on the accuracy of the data collection and maintenance at each institution as well as the maintenance at the system level. It was the responsibility of each institution to maintain accurate transcript data on each student. Community colleges undergo an annual audit to verify the accuracy of student records.

Because all of the institutions included in the study were semester-based, and have been since 1997 when the North Carolina Community College System changed from quarter to semester course offerings, data related to credit hours and semesters attended were comparable across institutions. The degrees offered and how the degrees

are grouped into categories varied by institution, so the researcher used overarching classifications for degree majors based on the categories of pre-majors in the NCCAA.

Before 2008 community colleges in North Carolina did not have a reliable way to indicate on a transcript whether students completed the general education core unless they also completed a transferable associate degree. The completion of this core should have provided transfer students protections under the articulation agreement that students without the general education core were not provided. The group of students who completed 44 credit hours without completing a degree includes students who did complete the general education core as well as those who did not. It was not possible to determine which students completed the general education core.

The research sample was split into two groups that each numbered over 13,000 students. These large groups showed a great deal of variety in the number of credit hours completed in the university system. Of the data collected, 37% of records were not included in this research study because the students did not pursue a transfer associate degree in the community college or because their records were missing information from one or more variables.

Data Analysis

In this study the independent variables were the path to completion of the general education requirements and degree major in the university. The two student samples differ in the path used to complete the general education requirements and included transfer students completing at least 44 transfer credit hours, the equivalent of a general education core in the NCCCS, and transfer students completing either an Associate of Arts or Associate of Science degree in the NCCCS. The group of students completing 44

credit hours without finishing a degree are referred to as *core completers* while the students finishing an associate degree are referred to as *associate degree completers*.

Degrees were grouped into seven categories, business, education, science, mathematics, humanities/fine arts, social science, and career/technical, based on the pre-majors available under the NCCAA.

The dependent variables in this study were baccalaureate degree completion and credit hours accumulated in the university. Baccalaureate degree completion was categorical and was measured as either completing a baccalaureate degree or not. Credit accumulation was measured as the sum of credits taken while attending the university.

Question One: The Relationship Between General Education Path and Persistence

The researcher compared the overall persistence rate for the two student samples to examine the relationship between the path used to complete the general education requirements in the community college and completion of a baccalaureate degree, two categorical variables. Chi-square was used to examine whether baccalaureate degree completion for the two research samples differed significantly. The null hypothesis for research question one stated that there was not a relationship between the pathway used to complete the general education core and baccalaureate degree completion.

Question Two: Impact of Degree Major on Relationship Between Path and Persistence

The analysis for research question two included two independent variables, path of general education completion and degree major, and one dependent variable, persistence to baccalaureate degree. All three variables were categorical. The researcher employed logistic regression analysis to examine the impact degree major has upon the relationship between general education pathway and persistence. The null hypothesis for

research question two stated degree major did not impact the relationship between the path used to complete the general education core and baccalaureate degree completion.

Question Three: The Relationship Between Path and Credits Accumulated

The analysis for question three included one independent variable, path of general education requirement completion, and one dependent variable, credits accumulated. The general education completion path was tabulated as completion of an associate degree or not, making it categorical. The researcher compared the means of the credits hours completed in the UNC system for the students in each sample who completed a baccalaureate degree. A t-test with equal variances not assumed was used to evaluate the significance of the difference in the credit hour means. A null hypothesis was assumed for research question three, meaning no relationship should exist between the path used to complete the general education core and the credits accumulated in the university system.

Question Four: Impact of Major on Relationship Between Path and Credits Accumulated

The analysis for question four included two independent variables, path of general education requirement completion and degree major, and one dependent variable, credits accumulated. Both independent variables were categorical. A two-way ANOVA was used to determine if there was a significant difference in the mean credit hours completed for students completing a baccalaureate degree. After finding a significant interaction effect, t-tests were used to examine differences in mean credit hours completed by each major. Because seven t-tests were calculated, one for each major, a Bonferroni adjustment was made ($\alpha' = .007$). The null hypothesis for research question four stated degree major does not impact the relationship between the path used to complete the general education core and the credits accumulated in the university system.

Summary

This research study examined whether two non-academic performance-based factors, the path to completion of the general education requirements and degree major, impacted baccalaureate degree persistence and university credit hour accumulation for transfer students. Data about persistence to baccalaureate degree and total credits accumulated as part of the baccalaureate degree completion was compared between students using two different paths to complete the general education requirements: completion of at least 44 credit hours, the equivalent of the general education core, or completion of a transfer-oriented associate degree. The researcher also examined both research samples to determine if degree major impacted degree persistence and credit accumulation. Degree majors were organized into seven researcher-defined categories. Data were obtained from the University of North Carolina data warehouse. The sample used for this study included 27,155 students exiting the North Carolina Community College system between the years 2000 and 2006 that then transferred to one of the 16 universities in the University of North Carolina system.

CHAPTER FOUR

Results

This research study compared students earning at least 44 credit hours in the community college, referred to as core completers, to students earning a transfer-oriented associate degree in the community college in order to determine if there was a relationship between the pathway used to complete the general education core and baccalaureate degree completion. For students completing a baccalaureate degree the researcher also examined the impact the pathway used to complete the general education core had upon the credit hours earned in the university system. The researcher also examined whether degree major impacted baccalaureate degree completion and credits earned in the university system. The following research questions were examined:

- 1) What was the impact of the student path used to complete the general education requirements at the community college on persistence to baccalaureate degree completion?
- 2) Did the relationship between the student path used to complete the community college general education requirements and persistence to degree completion vary by degree major at the university?
- 3) For those students who completed a baccalaureate degree, did differences in the number of credits accumulated in order to complete the baccalaureate exist based on the student path used to complete the community college general education requirements?
- 4) For those students who completed a baccalaureate degree, did the relationship between the student path used to complete the community college general

education requirements and the number of credits accumulated to complete a baccalaureate vary by degree major?

This ex post facto study was based on archival data maintained by the University of North Carolina General Administration. Transfer students earning at least 44 credit hours in the North Carolina Community College system before transferring to a university in the University of North Carolina system were separated into two groups, those who did not complete a transfer associate degree and those who did. Those two groups were separated by degree major for research questions two and four. There were seven degree major categories: business, education, science, mathematics, humanities/fine arts, social science, and career/technical. The degree categories are based on the course offerings included in the NCCAA.

Description of the Sample

There were 27,155 transfer students included in this study. All of the students completed at least 44 credit hours in one of the 58 colleges in the North Carolina Community College System before transferring to one of the 16 institutions in the University of North Carolina System between the years 2000 and 2006. The data were compiled in 2010, giving the students at least four years to complete a baccalaureate degree after transfer. The sample was 58% ($n = 15,782$) female and 42% ($n = 11,373$) male. Approximately half of the students ($n = 13,861$, 51%) did not complete an associate degree and 49% ($n = 13,294$) did complete a transfer oriented associate degree. Of the 27,155 students in the study, 47% ($n = 12,729$) did not complete a baccalaureate degree while 53% ($n = 14,426$) went on to complete a baccalaureate degree.

Data Analysis

Question One: Relationship between General Education Path and Baccalaureate Degree

The researcher used a contingency table to analyze the relationship between the path used to complete the general education requirements in the community college and completion of a baccalaureate degree, two categorical variables. Among the core completers, 53.13% ($n = 7,364$) completed a baccalaureate degree and 46.87% ($n = 6,497$) did not. Of the associate degree completers 53.12% ($n = 7,062$) did complete a baccalaureate degree and 46.88% ($n = 6,232$) did not. A chi-square analysis indicated there was not a statistically significant difference in baccalaureate completion rate between the general education core completers and associate degree completers [$\chi^2 (1, N=27,155) = < .001, p = .992$].

Question Two: Impact of Degree Major on Relationship Between Path and Persistence

The analysis for research question two included two independent variables, path of general education requirement completion and degree major, and one dependent variable, persistence to baccalaureate degree. All three variables were categorical. The baccalaureate completion results by major are shown in Table 2.

Table 2
Baccalaureate Degree Completion By Major

Major	Completed Baccalaureate		Did Not Complete Baccalaureate	
	n	%	n	%
Business				
Core Completers	1,408	57	1,066	43
Associate Degree	1,346	56	1,052	44
Education				
Core Completers	1,312	52	1,213	48
Associate Degree	1,228	50	1,266	50
Science				
Core Completers	1,018	45	1,248	55
Associate Degree	800	47	904	53
Mathematics				
Core Completers	59	38	95	62
Associate Degree	57	42	79	58
Humanities/Fine Arts				
Core Completers	861	53	761	47
Associate Degree	1,011	55	840	45
Social Science				
Core Completers	1,159	53	1,015	47
Associate Degree	1,299	54	1,085	46
Career/Technical				
Core Completers	1,547	58	1,099	42
Associate Degree	1,321	57	1,006	43

For students majoring in business, education, science, humanities/fine arts, social science, and career/technical degree the completion rate only varies by one or two percentage points for core completers and associate degree completers. For students majoring in mathematics there was a four percentage point difference in completion rate.

As shown in Table 3 the logistic regression analysis of these results indicated that none of the degree majors made a statistically significant impact on the relationship

between pathway used to complete the general education core and baccalaureate degree completion with a Cox & Snell $R^2 = .007$. Major*pathway indicates the impact the degree major had upon the relationship between pathway and persistence for each major.

Table 3
Impact of Degree Major on the Relationship Between General Education Path and Persistence

Major	B	S.E.	Wald	df	Sig.	Exp(B)
General education pathway	.070	.058	1.461	1	.227	1.072
Business	-.026	.059	.196	1	.658	.972
Education	-.303	.058	27.341	1	<.001	.739
Science	-.395	.064	37.916	1	<.001	.674
Mathematics	-.599	.179	11.222	1	.001	.549
Humanities/Fine Arts	-.087	.063	1.931	1	.165	.917
Social Sciences	-.092	.059	2.480	1	.115	.912
Career/Technical			72.328	6	<.001	
Business*pathway	-.038	.082	.214	1	.644	.963
Education*pathway	.039	.081	.239	1	.625	1.040
Science*pathway	-.151	.086	3.061	1	.080	.860
Mathematics*pathway	-.219	.247	.790	1	.374	.860
Humanities/Fine Arts*pathway	-.131	.089	2.167	1	.141	.877
Social Science*pathway	-.117	.083	1.994	1	.158	.890
Career/Technical*pathway			8.783	6	.186	
Constant	.272	.042	42.378	1	<.001	1.313

Degree major did not statistically significantly impact the relationship between general education pathway and degree persistence. Although the combination of degree major and general education pathway did not statistically significantly impact persistence, major alone did statistically significantly impact persistence for students majoring in education, science, mathematics, or a career/technical degree. Completion of an associate degree also did not statistically significantly impact baccalaureate degree persistence.

Question Three: The Relationship Between Path and Credits Accumulated

The analysis for question three included one independent variable, core completion or associate degree, and one dependent variable, credits accumulated. Credit hours accumulated while attending the university included all of the credits completed while in attendance at the transfer university. Analysis was limited to students who completed a baccalaureate degree. Core completers who entered the university without an associate degree ($n = 13,861$) required statistically significantly fewer credits to complete a baccalaureate degree ($M = 49.06$, $SD = 29.32$) than students who completed an associate degree ($n = 13,294$, $M = 50.80$, $SD = 32.82$), $t(27,018) = -4.60$, $p < .001$, 95% CI = -2.48 - -1.00. Associate degree completers took an average of one more credit hour than non-associate degree completers as part of completing a baccalaureate degree. There was a wide range of credit hours taken within each sample, so the standard deviation for both research groups exceeded 29 credit hours.

Question Four: Impact of Major on Relationship Between Path and Credits Accumulated

The analysis for question four included two independent variables, path of general education requirement completion and degree major, and one dependent variable, credits accumulated. Both independent variables were categorical. Table 4 shows the mean calculations for the credit hours completed in the university system for students transferring from the community college system based on the path used to complete the general education core and degree major declared when enrolling in the university system.

Table 4

Descriptive Statistics of the Impact of Degree Major on Relationship Between Pathway and Credits

Major	n	M	SD
Business			
Core Completers	2,474	49.98	30.09
Associate degree	2,398	48.42	27.92
Education			
Core Completers	2,525	45.58	31.43
Associate degree	2,494	46.97	29.06
Science			
Core Completers	2,266	59.15	36.44
Associate degree	1,704	56.86	36.01
Mathematics			
Core Completers	154	45.45	34.37
Associate degree	136	43.77	27.65
Humanities/Fine Arts			
Core Completers	1,622	52.53	31.80
Associate degree	1,851	49.88	27.15
Social Sciences			
Core Completers	2,174	52.00	31.09
Associate degree	2,384	49.31	27.00
Career/Technical			
Core Completers	2,646	47.63	33.70
Associate degree	2,327	45.63	28.54

The difference in mean credit hours taken to complete a baccalaureate degree for core completers and associate degree completers was three or fewer credit hours, the equivalent of one class, for all majors. All majors had a large standard deviation because credit hours completed varied across a wide range. Core completers took more hours

than associate degree completers in for all degree majors except education. Associate degree completers in education took about one credit hour more than core completers.

Table 5 shows the ANOVA results of the impact of degree major upon the relationship between the pathway used to complete the general education path and credits taken at the university as part of completing the baccalaureate degree. The pathway used to complete the general education core, degree major, and the interaction of pathway and degree major have a statistically significant impact upon credits taken in the university system as part of completing a baccalaureate degree.

Table 5

ANOVA of Impact Degree Major has upon Relationship Between Pathway and Credits

	df	F	p	η^2
Corrected Model	13	51.93	<.001	.045
Intercept	1	52591.09	<.001	.785
Pathway	1	36.20	<.001	.003
Major	6	86.89	<.001	.035
pathway * major	6	5.07	<.001	.002
Error	14,411			
Total	14,425			
Corrected Total	14,424			

As shown in Table 6, the statistically significant interaction between general education pathway and degree major was further analyzed using a t-test with equal variances not assumed and a Bonferroni-adjusted $\alpha' = .007$. The Bonferroni-adjusted level of significance was necessary because a t-test was run for each of the seven degree majors.

Table 6

T-test Analysis of Impact of Degree Major on the Relationship Between Path and Credits

Major	t	df	p	M_{Diff}	SE_{Diff}	95% CI	<i>d</i>
Business	1.88	4,861	.060	1.6	.83	-0.07 – 3.19	.06
Education	-1.62	4,995	.104	-1.3	.85	-3.06 - 0.29	-.05
Science	1.97	3,690	.049	2.3	1.2	0.01 – 4.56	.06
Mathematics	0.46	286	.644	1.7	3.6	-5.59 – 8.96	.06
Humanities/Fine Arts	2.65	3,207	.009	2.7	1.0	0.67 – 4.61	.10
Social Science	3.13	4,324	.002	2.7	.87	1.01 – 4.38	.10
Career/Technical	2.24	4,964	.024	2.0	.88	0.27 – 3.75	.07

There was a statistically significant difference in credit accumulation based on core completion pathway for students majoring in social science. None of the other degree majors showed a statistically significant interaction with general education pathway. The negative M_{diff} for education majors was a result of associate degree students taking on average more credit hours to complete a baccalaureate degree than the core completers, unlike the other degree majors.

Summary of Results

This chapter reported the results of the data analysis that examined the relationship between the pathway used to complete the general education core and baccalaureate degree completion. Additionally, for students who completed a baccalaureate degree this study examined the relationship between the pathway used to complete the general education core and credit hours completed in the university system. The two pathways used to complete the general education core included the completion of a transfer-oriented associate degree or the completion of at least 44 transfer credit hours without

earning a transfer oriented associate degree. This study also examined the impact degree major had upon both of these relationships. The university degree majors were organized into seven categories: business, education, science, mathematics, humanities/fine arts, social sciences, and career/technical.

The results of this research study indicated that the pathway used to complete the general education core did not statistically significantly impact baccalaureate degree persistence. The relationship between pathway of general education completion and baccalaureate degree persistence also was not statistically significantly impacted by degree major. There was a statistically significant difference in the credit hours accumulated as part of completing a baccalaureate degree based on the pathway used to complete the general education core, with core completers taking fewer credit hours than the associate degree completers. Degree major statistically significantly impacted the relationship between general education pathway and credits accumulated while completing a baccalaureate degree, although when examined separately social sciences was the only degree major that statistically significant impacted credit accumulation.

CHAPTER 5

Discussion and Conclusion

The purpose of this research study was to examine whether the pathway transfer students use to complete the general education core is related to baccalaureate degree completion and, for those students who completed a baccalaureate degree, the credit hours earned in the university system. In addition the researcher also examined the whether the degree major declared upon entering the university influenced the relationship between general education pathway and baccalaureate degree persistence and credit hours earned in the university system for the baccalaureate degree completers.

Many of the recent research studies have shown transfer students perform as well as native students in terms of GPA but are not graduating at the same rate as native students (Doyle, 2006; Glass & Harrington, 2002; McCormick, 2003). These studies of transfer student success often focused on the attributes of the transfer students themselves by looking at how traits such as community college GPA, high school GPA, attendance patterns, socioeconomic status, and standardized test scores have impacted baccalaureate persistence and performance at the university level. These studies have not definitively answered the question as to why transfer students perform as well in terms of GPA but do not graduate at the same rate as native students. Best and Gehring (1993) theorized the inconsistency between academic performance and persistence to degree was a result of external elements, such as credit acceptance and counseling services, which created barriers for transfer students. Institutional traits, specifically the acceptance of transfer credits and degree major, need to be examined to determine if the disconnect between performance and baccalaureate completion is related to these institutional traits. The

current research study examined the relationship between general education completion pathway and baccalaureate degree persistence as well as credits earned in the university system for the students who did complete a baccalaureate degree. The different pathways used in this study both meet the general education core requirements but students entered the university with different credit hours earned. The impact of degree major upon the relationship between pathway and persistence and credit hours completed was also examined.

The NCCAA was established to improve student retention and success while also reducing the need for duplicative credit hours, and therefore the costs, associated with students' transferring from a community college to a state supported university. If the articulation agreement provides credit protection to transfer students who completed an associate degree, these students should experience fewer transfer barriers and therefore an increased chance of completing a baccalaureate degree as compared to transfer students who did not complete an associate degree. In addition to a higher persistence rate, associate degree completers should enter the university system as juniors while non-associate degree completers with at least 44 transferrable credit hours in the community college system should enter the university system as second semester sophomores. The different entry points should put associate degree completers closer to baccalaureate degree completion based on credit completion.

The student sample in this study was composed of transfer students who completed at least 44 transfer-level credit hours, the minimum required to complete the general education core as defined by the NCCAA. This sample was split into two groups, students who completed a transfer-oriented associate degree and students who did

not complete a transfer-oriented associate degree. Therefore the fundamental differences in these two samples were the number of credit hours being transferred into the university system and the credit transfer protection provided by the NCCAA. Each of those groups was further split based on the major declared when entering the university. Seven degree areas were designated for this study including, business, education, science, mathematics, humanities/fine arts, social sciences, and career/technical programs.

Research Questions

The following research questions were the guide used to examine the effectiveness of the North Carolina Comprehensive Articulation Agreement based on the credits completed in the community college system and major declared upon entering the university system.

- 1) What was the impact of the student path used to complete the general education requirements at the community college on persistence to baccalaureate degree completion?
- 2) Did the relationship between the student path used to complete the community college general education requirements and persistence to degree completion vary by degree major at the university?
- 3) For those students who completed a baccalaureate degree, did differences in the number of credits accumulated in order to complete the baccalaureate exist based on the student path used to complete the community college general education requirements?
- 4) For those students who completed a baccalaureate degree, did the relationship between the student path used to complete the community college general

education requirements and the number of credits accumulated to complete a baccalaureate vary by degree major?

The data used in this study were gathered from a data warehouse maintained by The University of North Carolina and included records from all 58 North Carolina Community Colleges and 16 UNC system institutions. The data were compiled to create a student profile for each student that transferred from a North Carolina Community College to a university in the University of North Carolina System.

Conclusions and Discussion of Findings

An explanation of the results for each research question is provided below. The conclusions drawn relate to the effectiveness of the NCCAA in regard to protection of the transfer credit for students separated by the pathway used to complete the general education core then further separated by the degree major declared upon entering the university.

The Relationship Between the Path and Baccalaureate Degree Persistence.

There was no statistically significant difference in persistence between students transferring after completing a transfer associate degree and students who completed at least 44 transfer credit hours but did not complete a transfer associate degree. There was a 53.1% baccalaureate degree completion rate for both the core completers and associate degree completers. This persistence rate is similar to the 54.7% persistence rate for transfer students found by Glass and Harrington (2002). These results are also consistent with the Carlan and Byxbe study (2000) which found the completion of an associate degree did not have a statistically significant impact on academic performance after transfer. Best and Gehring (1993) found increased persistence for students completing at

least 60 credit hours in the community college, the equivalent of an associate degree. The results of this current study do not support the Best and Gehring results since completing an associate degree did not statistically significantly differ from completing the equivalent of the general education core only. It was not possible to determine if baccalaureate non-completers transferred to institution outside the University of North Carolina system to complete a baccalaureate degree or completed a baccalaureate degree after the data were collected. Personal variables about the students included in this study were not included in the analysis. The literature review indicated that although these variables differed between native and transfer students they did not explain the persistence and credit completion difference.

The results of this study indicate that whether the general education core is completed alone or as part of an associate degree, it provides transfer students with an equal probability of completing a baccalaureate degree. The completion of a transfer associate degree did not increase a student's baccalaureate degree persistence as long as the student had completed at least 44 credit hours before transferring. The lack of a difference in persistence for students completing an associate degree can be interpreted as meaning the additional protections provided by the NCCAA for students completing a transfer associate degree do not improve baccalaureate persistence. It also means the additional credits required to complete an associate degree after meeting the general education requirement, elective credits, do not improve baccalaureate persistence for associate degree completers as compared to non-associate degree completers.

The Impact of Degree Major on the Relationship Between Path and Persistence

The two student samples, core completers and associate degree completers, were further split based on the degree major declared upon acceptance at the university. The majors were grouped into seven categories: business, education, science, mathematics, humanities/fine arts, social sciences, and career/technical degrees. Degree major did not statistically significantly impact the relationship between general education pathway and persistence. Although degree major did not statistically significantly impact the relationship between pathway and persistence, it was found that degree major alone had a statistically significant impact on persistence for students majoring in education, science, mathematics, and career/technical degrees. Core completers majoring in business, education, and career/technical degrees were more likely to complete a baccalaureate degree than the associate degree completers. Science, mathematics, humanities/fine arts and social science majors who earned an associate degree were more likely to complete a baccalaureate degree than the core completers. Carlan and Byxbe (2000) also found science students did not perform as well after transfer as other majors. Carlan and Byxbe also noted that business majors did not perform as well after transfer, but this current study did not support that finding as far as persistence was concerned.

Relationship Between Path and Credit Accumulation

Students completing a transfer associate degree are guaranteed to transfer at least 64 credit hours to the university upon acceptance based on the NCCAA. Students who do not complete a transfer associate degree are not guaranteed any level of credit acceptance, unless they complete the general education core. Students who complete the general education core have met the general education requirements for the university system and should be awarded between 44 and 48 credits upon acceptance to the

university. This means that associate degree completers should enter the university with more credits towards a baccalaureate degree than core completers.

There was a statistically significant difference in the credits accumulated while attending the university when comparing students who completed a transfer associate degree and those who completed at least 44 credit hours but did not complete a transfer associate degree. It was not possible to determine whether the non-associate degree completing students met the general education core, but whether they did or not, they should have entered the university with fewer credits than a student that did complete a transfer associate degree. Since students that completed a transfer associate degree should have entered the university system with more credits, they should have needed to accumulate fewer credits to complete a baccalaureate degree than the students who did not complete a transfer associate degree. The data, however, indicated that non-associate degree completers took on average one fewer credit hour in the university system than associate degree completers. There was a large standard deviation for credit hours completed in the university system for baccalaureate degree completers. It is possible that factors not accounted for in this study impacted credit hours completed, resulting in a large standard deviation.

It is important to remember that the credit hours completed in the community college beyond the general education core are elective credits. Therefore, students that enter the university after completing a transfer associate degree take more elective credit hours into the university than the students who did not complete a transfer associate degree. These results indicate that completing elective credits while attending the community college did not reduce the credits students had to accumulate at the university

in order to complete a baccalaureate degree. In fact, associate degree completers took on average one credit hour more in the university than the core completers even though they should have entered the university with the equivalent of one semester more credit. This means there was a disadvantage in terms of credit accumulation while attending the university for students who completed hours beyond the general education core while attending a community college.

One possible reason associate degree completers take more credits is because they enter the university without having met the prerequisites for junior-level course within the major. Transfer students would be required to spend at least one semester taking prerequisite classes before they could begin the junior-level courses. This means students transferring into the university would need five semesters to complete the junior and senior years regardless of the number of credits they brought to the university.

The Impact of Degree Major on the Relationship Between Pathway and Credits Accumulated

The two student samples, associate degree completers and non-associate degree completers who earned at least 44 credit hours in the community college system, were further divided based on the degree major declared upon entrance to a university. Degree majors were grouped into seven categories: business, education, science, mathematics, humanities/fine arts, social science, and career/technical degrees. Credit accumulation in the university by baccalaureate degree completers was statistically significantly impacted by the interaction between the pathway and degree major. The mean credit hours completed by core completers and associate degree completers within each major never varied by more than three credit hours, the equivalent of one course. Only students

majoring in social science degrees showed a statistically significant difference in credit hours completed with core completers taking on average two more credits than associate degree completers. None of the other degree majors, including business, education, science, mathematics, humanities/fine arts, and career/technical, statistically significantly impacted the average credits completed in the university system for baccalaureate degree completers. This means that entering the university system with the elective credits that complete the associate degree once the general education core has been met does not reduce the credits necessary to complete a baccalaureate degree for students majoring in business, education, science, mathematics, humanities/fine arts, and career/technical degrees. The articulation agreement also did not protect the associate degree completers from being required to repeat credits since they were required to take as many credits in the university as students who entered the system without an associate degree.

Recommendations

The NCCAA guarantees that students completing a transfer associate degree as outlined will be accepted to one of the universities in the University of North Carolina System. Upon acceptance students will have met the general education core, and at least the 64 credits that comprise the associate degree will be accepted by the university. There is no provision, however, about how the elective credits that comprise the remainder of the associate degree beyond the general education core will be used upon transfer to the university. The articulation agreement only addresses acceptance to the university. Acceptance into a degree program is a separate step from acceptance into the university, and acceptance into a degree program is not addressed by the NCCAA. The completion of the general education core guarantees students will be given credit for the

general education core upon transfer, but the elective credits are not protected, so associate degree completing students may have to complete as many credits in the university as a core completer if the elective credits are not applied towards the degree. Although these elective credits may provide students with personal benefits, they do not increase the likelihood a student will complete a baccalaureate degree nor reduce the credits a student will need to complete in the university system.

Recommendations for Practice

Although students with a transfer associate degree are deemed to have met the general education core, they must then meet the course requirements for the degree major, which can include course work not offered at the community college. If associate degree students enter the university lacking pre-requisite courses required to take the junior-level courses in the degree major, they would be required to take additional credits that a non-associate degree transfer student could take before reaching junior status. The ability to take pre-requisites courses before reaching the junior year may allow non-associate degree students to progress to baccalaureate completion taking the same number of credits in the university as the associate degree completers.

The North Carolina Community College System and University of North Carolina System need to examine the purpose of the elective credits included in the transfer associate degrees. For the students included in this study the completion of elective credits at the community college did not reduce the credits taken at the university or increase baccalaureate degree persistence. This means the state of North Carolina, which subsidizes the education costs for students attending community colleges and universities, is paying for students to take credits in the community college system that

are not being utilized in the university system. It also means associate degree completing students are paying to take as many credits in the university system as students who completed fewer credits in the community college system. This double payment for credits does not provide the cost benefits Dougherty's (1994) state relative autonomy theory described as a benefit for the state and the students. If the elective credits earned at the community college cannot be used to meet the prerequisites required to take junior-level courses at the university, the articulation agreement should be modified to provide full protection to core completers and encourage students to transfer before the completion of the associate degree. The articulation agreement could also be amended to provide protection for elective credits earned at the community college and reduce the number of prerequisite courses required at the university before taking junior level courses.

Advisors in the community college system can emphasize the benefits of completing the general education core and advise students to transfer to a university once the core has been completed. Since the general education core is accepted as a unit under the articulation agreement, transfer students would enter the university as second semester sophomores. These students would have met the general education core, eliminating the need to take additional general education courses, and they would have one semester to take any required prerequisite classes before becoming a junior. For students seeking to complete a transfer associate degree, advisors should counsel the students to pick electives that best fit the university major the students plan to complete and to work closely with the university to which they plan to transfer. Community college advisors should also let students know that the articulation agreement does not

cover credit acceptance by the degree program, so some of the credits accepted by the university during the admissions process may not apply to the degree being sought.

University degree programs can reduce the need to duplicate credits by either designing degrees that do not require majors-level courses during the freshman and sophomore years or offering these majors-level courses to students currently enrolled in the community college. Community colleges generally cannot provide majors-level courses, which puts transfer students at a distinct disadvantage when they transfer to the university and cannot begin junior-level coursework because they have not completed the required prerequisites. Designing degrees so transfer students can enter as a junior on par with other students would be a cost savings for the state and students by reducing the courses necessary to graduate after transfer.

Recommendations for Research

This research study provided data to indicate that the elective credits earned in the community college system did not benefit students when they transferred to the university system. It was not possible to determine if the students included in this study who did not complete a transfer associate degree had completed the general education core. The non-associate degree completing students had accumulated enough hours to complete the general education core, but at the time this data was compiled the community college system did not have a method to indicate if a student completed the core without completing a transfer associate degree. Since this data was compiled, the community college system has created a transfer diploma that includes only the general education core. Future research would be able to compare students completing the college transfer diploma to students completing a transfer associate degree. This would

allow researchers to better identify the value of the elective credits earned in the community college system.

The data provided for this study did not include the credits accepted by the university for associate degree completing students. Data related to native university students also was not available. The inclusion of transfer credits accepted and native student data would allow researchers to evaluate if transfer student persistence differed from native students having completed the same credits. It would also allow researchers to compare credits accepted by the university and credits earned at the community college to persistence and credits completed in the university system.

Strengths, Delimitations, and Limitations of the Study

This analysis contained data collected from all 58 community colleges in North Carolina about students who transferred to all 16 institutions in the University of North Carolina system. These students all had at least four years in the university system to complete a baccalaureate degree after transfer. The inclusion of students leaving the community college system over a six-year period allowed the researcher to evaluate the effectiveness of the NCCAA for a large sample.

This study was limited to students who completed at least 44 transferrable credit hours in a North Carolina community college and then transferred to a university in the University of North Carolina system. The NCCAA provides transfer credit protection for students completing a transfer associate degree or the general education core in a North Carolina community college before transferring to a university in the University of North Carolina system. Although there is a separate articulation agreement between the North Carolina Community College System and the Association of Independent Colleges and

Universities in North Carolina, there is no data warehouse that creates student profiles matching data from the community college system to data from the independent college and universities. Students transferring from a North Carolina community college to an independent university were not included in this study. The existence of the data warehouse maintained by the University of North Carolina system allowed the researcher to collect data about transfer student performance in the University of North Carolina system.

Data related to the hours accepted by the university was not provided for students entering the university with a transfer associate degree. This eliminated the possibility of comparing the credits earned in the community college to credits accepted by the university. The data also included a wide variety of credits completed in the university system, some of which appeared to be outside the realm to grant a degree. The researcher was also not provided with data related to native university students which limited the scope of this study.

Conclusion

This research study examined baccalaureate persistence and credit accumulation for transfer students who transferred from the North Carolina Community College System to the University of North Carolina System after completing either a transfer associate degree or at least 44 transferable credit hours without completing a degree. The main objective of this study was to examine whether the NCCAA provided credit transfer protection for associate degree completers as compared to non-associate degree completers.

Completing a transfer associate degree did not improve transfer student baccalaureate persistence, nor did it decrease credit accumulation in the university system for baccalaureate degree completers. Associate degree students did not complete fewer credit hours in the university than non-associate degree students who completed a baccalaureate degree. The current NCCAA does not provide protection for the elective credits earned beyond the general education core in the community college system. Degree programs within the university can require prerequisites for junior level courses that transfer students cannot complete in the community college system. Completing the elective credits in the community college system did not help the associate degree earning students in this study to persist at a higher rate or earn fewer credits than transfer students completing only the general education core.

A lack of elective credit protection costs both students and the state of North Carolina when students take courses at the community college that do not apply to the university degree. North Carolina needs to review the articulation agreement to determine if there is a way to reduce the loss of elective credits experienced by associate degree completers. Universities also need to examine whether degree programs are violating the spirit of the articulation agreement by requiring specific general education courses for entry to a degree program. This practice means even though transfer students complete the general education core they would have to take additional general education courses, a duplication of credits requiring the student and the state to pay for courses in a subject area that has already been fulfilled. States designing articulation agreements should study how to best allow universities the autonomy to have unique curricula while

also making transfer a cost-effective process for the students and the state by applying the credits earned in the community college to the degree major.

References

- Alfonso, M. (2006). The impact of community college attendance on baccalaureate attainment. *Research in Higher Education, 47*, 873-903.
- Anderson, G. M., Sun, J.C., & Alfonso, M. (2006a). Effectiveness of statewide articulation agreements on the probability of transfer: A preliminary policy analysis. *The Review of Higher Education, 29*, 261-291.
- Anderson, G. M., Sun, J.C., & Alfonso, M. (2006b). Rethinking cooling out at public community colleges: An examination of fiscal and demographic trends in high education and the rise of statewide articulation agreements. *Teachers College Record, 108*, 422-451.
- Barkley, S. (1993). A synthesis of recent literature on articulation and transfer. *Community College Review, 20*(4), 38-46. Retrieved January 9, 2009, from Academic Search Premier database.
- Best, G. A., & Gehring, D. D (1993). The academic performance of community college transfer students at a major state university in Kentucky. *Community College Review, 21*(2), 32-41.
- Carlan, P. E., & Byxbe, F. E. (2000). Community colleges under the microscope: An analysis of performance predictors for native and transfer students. *Community College Review, 28*(2), 27-43.
- Carey, K. (2010). Despite years of credit, still no degree. *Chronicle of Higher Education, 56*(31), 32.

- Cejda, B. D., Kaylor, A. J., & Rewey, K. L. (2010). Transfer shock in an academic discipline: The relationship between students' majors and their academic performance. *Community College Review*, 26(3), 1-13.
- Christie, R. L., & Hutcheson, P. (Fall 2003). Net effects of institutional type of baccalaureate degree attainment of "traditional" students. *Community College Review*, 31(2), 1-19.
- Cohen, A.M., & Braver, F.B. (1996). *The American community college*. San Francisco: Jossey-Bass, Inc.
- Diaz, P. E. (1992). Effects of transfer on academic performance of community college students at the four-year institution. *Community/Junior College Quarterly*, 27, 279-291.
- Dougherty, K. (1987). The effects of community colleges: Aid or hindrance to socioeconomic attainment? *Sociology of Education*, 60, 86-103.
- Dougherty, K. (1992). Community colleges and baccalaureate attainment. *Journal of Higher Education*, 63, 188-214.
- Dougherty, K. (1994). *The contradictory college: The conflict origins, impacts, and futures of the community college*. Albany, NY: State University of New York Press.
- Dougherty, K. J., & Kienzl, G. S. (2006). It's not enough to get through the open door: Inequalities by social background in transfer from community colleges to four-year colleges. *Teachers College Record*, 108, 452-487.
- Doyle, W. R. (2006). Community college transfers and college graduation. *Change*, 38(3), 56-58.

- Fraenkel, J. R., & Wallen, N. E. (2006). *How to design and evaluate research in education* (6th ed.). New York: McGraw Hill.
- Glass, J. C., & Harrington, A. R. (2002). Academic performance of community college transfer students and "native" students at a large university. *Community College Journal of Research and Practice*, 26, 415-430.
- Graham, S., & Dallum, J. (1986). Academic performance as a measure of performance: Contrasting transfer students to native students. *Community/Junior College Quarterly*, 10, 23-33.
- Handel, S. J. (2010). Silent partners in transfer admissions. *Chronicle of Higher Education*, 57(5), 21-22.
- Hollingsworth, M. (2010). Transfer students must evaluate options, and achieve them. *Chronicle of Higher Education*, 57(10), 22.
- Hughes, J. A., & Graham, S. W. (1992). Academic performance and background characteristics among community college transfer students. *Community/Junior College Quarterly*, 16, 35-46.
- Ignash, J., & Townsend, B. (2000). Evaluating state-level articulation agreements according to good practice. *Community College Review*, 28(3), 1-18. Retrieved January 9, 2009, from Academic Search Premier database.
- Karabel, J. (1986). Community college and social stratification in the 1980s. *New Directions for Community Colleges*, 54, 13-30. San Francisco: Josey-Bass, Inc.
- Laird, B. (2009). The trouble with transferring: it shouldn't be so difficult. *Chronicle of Higher Education*, 55(29), 22-23.

- Lindstrom, J., & Rasch, K. D. (2003). Transfer issues in preservice undergraduate teacher education programs. *New Directions for Community Colleges, 121*, 17-26.
Retrieved December 2, 2010, from the Wiley Periodicals, Inc. online library.
- McCormick, A. C. (2003). Swirling and double-dipping: New patterns of student attendance and their implications for higher education. *New Directions for Higher Education 121*, 13-24. Retrieved December 2, 2010, from the Wiley Periodicals, Inc. online library.
- McCormick, A. C., & Carroll, C. D. (1997). *Transfer behavior among beginning postsecondary students, 1989-94*. Washington, D.C.: U.S. Department of Education.
- Nolan, E. J., & Hall, D. L. (1978). Academic performance of the community college transfer student: A five-year follow-up study. *Journal of College Student Personnel, 19*, 543-548.
- Pascarella, E. T., & Terenzini, P. T. (Eds.) (2005). *How College Affects Students (Vol. 2)*. San Francisco: Jossey-Bass.
- Rifkin, T. (1996). Transfer and articulation policies: Implications for practice. *New Directions for Community Colleges, 96*, 77-85. San Francisco: Josey-Bass, Inc.
- Robertson, P. F., & Frier, T. (1996). The role of the state in transfer and articulation. *New Directions for Community Colleges, 96*, 15-24. San Francisco: Josey-Bass, Inc.
- Roksa, J., & Keith, B. (2008). Credits, time, and attainment: Articulation policies and success after transfer. *Educational Evaluation and Policy Analysis, 30*, 236-254.

Townsend, B. K. (2002). Transfer rates: A problematic criterion for measuring the community college. *New Directions for Community Colleges*, 117, 13-23.

Retrieved December 2, 2010, from the Wiley Periodicals, Inc. online library.

Comprehensive articulation agreement between the university of North Carolina and the North Carolina community college system. (September 2008). Retrieved May 1 2012, from

http://www.northcarolina.edu/aa/articulation/102.51CAA_Modified_September_2008_v3.pdf

APPENDIX A

Comprehensive Articulation Agreement Between the University of North Carolina and
The North Carolina Community College System

**COMPREHENSIVE ARTICULATION AGREEMENT
BETWEEN
THE UNIVERSITY OF NORTH CAROLINA
AND
THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM**

**Approved by the Board of Governors of The University of North Carolina and
the State Board of the North Carolina Community College System**

**September 2008
(revised)**

**Originally published March 1, 1996
Revised January 1997; June 1999; November 1999;
October 2002; April 2003; August 2004; November 2004; December 2004; May 2005; February 2007;
September 2007; February 2008; June 2008**

(This document, complete with appendices, is available at
http://www.northcarolina.edu/content.php/assessment/reports/student_info.htm)

**COMPREHENSIVE ARTICULATION AGREEMENT (CAA)
BETWEEN THE UNIVERSITY OF NORTH CAROLINA
AND THE NORTH CAROLINA COMMUNITY COLLEGE SYSTEM**

TABLE OF CONTENTS

- I. Originating Legislation Overview**
- II. Assumptions and Intent**
- III. Policies**
- IV. Regulations**
- V. Appendices**
 - A. Originating Legislation**
 - B. Purpose and History**
 - C. Transfer Advisory Committee Procedures**
 - D. Transfer Advisory Committee**
 - E. CAA Grievance Procedure**
 - F. Associate in Arts and Associate in Science Curriculum Standards and Pre-Majors**
 - G. Associate in Fine Arts Curriculum Standards and Pre-Majors**
 - H. Transfer Course List**

This document contains the articulation agreement in sections I-IV. Supporting documentation is provided in the appendices.

I. ORIGINATING LEGISLATION OVERVIEW

The Comprehensive Articulation Agreement fulfills the provisions of House Bill 739 and Senate Bill 1161 (1995 Session of the General Assembly). The original legislation is provided in Appendix A. Section 1 of HB 739 instructed the Board of Governors of The University of North Carolina and the State Board of Community Colleges to develop a plan for the transfer of credits between the institutions of the North Carolina Community College System and between them and the constituent institutions of The University of North Carolina. Section 3 of HB 739 instructed the State Board of Community Colleges to implement common course descriptions for all community college programs by June 1, 1997. Section 1 of SB 1161 directed The University of North Carolina Board of Governors and the State Board of Community Colleges to develop a plan that ensures accurate and accessible academic counseling for students considering transfer between community colleges and between community colleges and the constituent institutions of The University of North Carolina. Section 2 of SB 1161 required the two Boards to establish a timetable for the development of guidelines and transfer agreements for program majors, professional specialization, and associate in applied science degrees. Section 3 of SB 1161 directed the State Board of Community Colleges to review its policies and rules and make any changes that are necessary to implement the plan for the transfer of credits.

II. ASSUMPTIONS AND INTENT

The Comprehensive Articulation Agreement between The University of North Carolina and the North Carolina Community College System rests upon several assumptions common to successful statewide comprehensive articulation agreements. The primary assumption is that institutions recognize the professional integrity of other public post-secondary institutions that are regionally accredited for college transfer programs. All courses designated as approved for college transfer under this agreement will be taught by faculty who meet Southern Association of Colleges and Schools (SACS) Commission on Colleges credential requirements. A secondary assumption is that sufficient commonality exists in the lower-division general education requirements currently offered among all universities to develop a common general education component at the community colleges for the purpose of transfer.

The general education transfer core is similar to each institution's lower-division general education requirements but is not identical in that specific courses may differ. The underlying concept is that competencies and understandings developed by general education programs as a whole are more important than individual courses; therefore, the block transfer of a core is important. The general education requirements of the receiving institutions remain in effect for all students not participating in this comprehensive articulation agreement; any upper-division general education requirements and graduation requirements remain unaffected by this agreement. Institution-wide, lower-division general education requirements serve as the starting point for determining specific general education courses in each baccalaureate major. The specific lower-level courses required for each major are the subject of the pre-majors developed by joint discipline committees. The purpose and history are provided in Appendix B.

III. POLICIES

The Comprehensive Articulation Agreement (CAA) applies to all fifty-eight North Carolina community colleges and all sixteen constituent institutions of The University of North Carolina. The CAA is applicable to all North Carolina community college students who have completed the 44-hour general education core or graduated with an A.A. or A.S. degree and transfer to a constituent institution of The University of North Carolina. The regulations for implementation of the CAA were originally approved by the Board of Governors and the State Board of Community Colleges. The Transfer Advisory Committee (TAC) oversees refinements of the regulations and minor changes. Significant changes will be brought to the Board of Governors and the State Board of Community Colleges for review at the discretion of the respective Presidents of The University of North Carolina and the North Carolina Community College System. The TAC Procedures are provided in Appendix C.

Since the CAA was first established, the state of North Carolina has encouraged high school students to maximize their time by taking college coursework under initiatives including, but not limited to: Huskins courses; Dual Enrollment; Learn and Earn high schools; and Learn and Earn Online. The CAA policies extend to high school students taking college coursework through the NC Community College System and/or the constituent universities of the University of North Carolina.

A. Transfer Advisory Committee (TAC)

Authority to interpret the CAA policy rests with the TAC. The TAC is an eight-member committee appointed by the Presidents of the North Carolina Community College System and The University of North Carolina. Questions concerning the CAA policy interpretations should be directed to the appropriate system's chief academic officer with an explanation of the institutional policy that may (appear to) be in conflict with CAA policy. The chief academic officer will forward unresolved questions to the TAC for interpretation.

Questions about the transferability of the course work under the CAA or any proposed changes to the policies, the general education core, or pre-majors must be addressed by the TAC. Changes to curriculum standards for the associate in arts, associate in science, and the associate in fine arts degree programs require the approval of the governing boards of both systems.

B. Transfer Assured Admissions Policy (TAAP)

The CAA addresses the admission of community college graduates to UNC institutions and the transfer of credits between institutions within the North Carolina Community College System and institutions within The University of North Carolina.

The CAA assures admission to one of the 16 UNC institutions with the following stipulations:

- Admission is not assured to a specific campus or specific program or major.
- Students must have graduated from a North Carolina community college with an associate in arts or associate in science degree.
- Students must meet all requirements of the CAA.
- Students must have an overall GPA of at least 2.0 on a 4.0 scale, as calculated by the college from which they graduated, and a grade of "C" or better in

all CAA courses.

- Students must be academically eligible for re-admission to the last institution attended.
- Students must meet judicial requirements of the institution to which they apply.
- Students must meet all application requirements at the receiving institution including the submission of all required documentation by stated deadlines.

If a student is denied admission to a UNC institution, then he or she will receive a letter from that institution directing the student to the College Foundation of North Carolina (CFNC) website. At the CFNC website (CFNC.org), the student will be presented with the conditions of the TAAP (specified above), and if these conditions are met, the student will be given information regarding space availability and contacts within the UNC system. The student should contact those institutions to get specific information about admissions and available majors.

If the previous steps do not result in admission to a UNC institution, then the student should contact the CFNC Resource Center at 1-866-866-CFNC.

C. CAA Grievance Policy

If a transfer student perceives that the terms of the CAA have not been honored, he or she may follow the CAA Grievance Procedure as outlined in Appendix E.

IV. REGULATIONS

A. Transfer of Credits

The CAA establishes the procedures governing the transfer of credits for students who transfer from a North Carolina Community College to a constituent institution of The University of North Carolina. The CAA does not address admission to a specific institution or to a specific major within an institution.

1. Eligibility

To be eligible for the transfer of credits under the CAA, the student must graduate from the community college with an Associate in Arts (AA) or Associate in Science (AS) degree or have completed the 44-hour general education core as defined below and have an overall Grade Point Average (GPA) of at least 2.0 on a 4.0 scale and a grade of "C" or better in all CAA courses.

2. Definition of the 44-hour General Education Core

The associate in arts and associate in science degree programs in the North Carolina Community College System require a total of 64-65 semester hours credit for graduation (see Appendix F). Within the overall total, the community college system and the university have developed a general education core component. This curriculum reflects the distribution of discipline areas commonly included in institution-wide, lower-division general education requirements for the baccalaureate degree.

The general education core includes study in the areas of English composition, humanities and fine arts, natural sciences and mathematics, and social and behavioral sciences. Within the core, community colleges must include opportunities for the achievement of competence in reading, writing,

oral communication, fundamental mathematical skills, and basic computer use. Students must meet the receiving university's foreign language and/or health and physical education requirements, if applicable, prior to or after transfer to the senior institution. The semester hours credit (SHC) distribution of the general education core is as follows:

English Composition (6 SHC)

Two English composition courses are required.

Humanities/Fine Arts (9-12 SHC)

Four courses (AA) or three courses (AS) must be selected from at least three of the following discipline areas: art, dance, drama, foreign languages, interdisciplinary humanities, literature, music, philosophy, and religion. At least one course must be a literature course. (3 SHC in Speech/Communication may be substituted for 3 SHC in Humanities/Fine Arts. Speech/Communication may not substitute for the literature requirement.)

Social/Behavioral Sciences (9-12 SHC)

Four courses (AA) or three courses (AS) must be selected from at least three of the following discipline areas: anthropology, economics, geography, history, political science, psychology, and sociology. At least one course must be a history course.

Natural Sciences/Mathematics (14-20 SHC)

Natural Sciences (8 SHC): At least two courses, including accompanying laboratory work, must be selected from among the biological and physical science disciplines. (A minimum two-course sequence from general biology, general chemistry, or general physics is required for the AS.)

Mathematics (6 SHC): At least one introductory mathematics course (college algebra, trigonometry, calculus, etc.) must be selected; the other unit may be selected from among other quantitative subjects, such as computer science and statistics for the AA. The AS requires one course at the precalculus algebra level or above; the other course(s) must be higher level mathematics or may be selected from among other quantitative subjects such as computer science and statistics.

The specific number and distribution of courses used to fulfill the requirement in each of these areas will be identified by each community college as meeting its own general education requirements. The courses will be drawn from those courses designated in the North Carolina Community College Combined Course Library as being appropriate as part of a general education core. This will preserve the autonomy of each community college to develop its own general education program, including those aspects that make its program unique. Students are directed to the pre-majors for specifics regarding courses and distribution (see Appendix F).

The general education core component, if completed successfully by a student with a grade of "C" or better in each course, shall be portable and transferable as a block across the North Carolina Community College System and from that system to UNC institutions, whether or not the transferring student has earned the associate degree. Under special circumstances, a university may choose to accept additional credit hours.

3. Procedures for the Transfer of Credits

Transfer of associate in arts and associate in science degree programs in the community college system

- a. The CAA enables North Carolina community college graduates of two-year associate in arts and associate in science degree programs who are admitted to constituent institutions of The University of North Carolina to transfer with junior status.
- b. Universities cannot place requirements on students transferring under the CAA that are not required of their native students.
- c. Transfer students will be considered to have satisfied the UNC Minimum Course Requirements (MCR) in effect at the time of their graduation from high school if they have:
 - 1) received the associate in arts, the associate in science, the associate in fine arts, the baccalaureate or any higher degree, or
 - 2) completed the 44-hour general education core, or
 - 3) completed at least six (6) semester hours in degree-credit in each of the following subjects: English, mathematics, the natural sciences, and social/behavioral sciences, and (for students who graduate from high school in 2003-04 and beyond) a second language.
- d. Community college students who have completed the general education core will be considered to have fulfilled the institution-wide, lower-division general education requirements of the receiving institution.
- e. Community college graduates of these programs who have earned 64 semester hours in approved transfer courses with a grade of “C” or better and an overall GPA of at least 2.0 on a 4.0 scale will receive at least 64 semester hours of academic credit upon admission to a university.
- f. Requirements for admission to some major programs may require additional pre-specialty courses beyond the pre-major taken at the community college. Students entering such programs may need more than two academic years of course work to complete the baccalaureate degree, depending on requirements of the program.
- g. All courses approved for transfer in the CAA are designated as fulfilling general education, pre-major or elective requirements (see Appendix H). While general education and pre-major courses may also be used as electives, elective courses may not be used to fulfill general education requirements.
- h. CAA courses taken beyond the 64 SHC of credit in which the student received less than a “C” will not negate the provisions of the CAA.

B. Procedures for the Transfer of Credit for Special Populations

1. Transfer of general education core courses for non-graduates

Upon admission to another public two-year institution or to a public university, students who have completed the general education core with the proper distribution of hours, but who have not completed the associate degree, will be considered to have fulfilled the institution-wide, lower-division general education requirements of the receiving institution. To be eligible for inclusion in this policy, a student must have an overall GPA of at least 2.0 on a 4.0 scale at the time of transfer and a grade of

"C" or better in all core courses. Upon transfer at the sophomore level, a non-graduate who has completed the general education core should be advised at the university to take pre-major or cognate courses based on his or her chosen major.

Certification of completion of the general education core for non-graduates is the responsibility of the community college at which the core is completed. The transcripts of students who transfer before completing the general education core will be evaluated on a course-by-course basis by the receiving university. The transferring student who has not completed the core must meet the receiving institution's general education requirements.

2. Transfer of pre-majors or professional specialty courses

Beyond the general education core, a program of study leading to the associate degree contains courses related to a student's major or program emphasis. Joint academic discipline committees developed system-wide guidelines for community college curricula that will prepare students for intended majors or professional specializations at the baccalaureate level. Statewide pre-majors for AA and AS degree programs have been developed for specific major fields (see Appendix G). If a pre-major requires or recommends 64-65 SHC, then it becomes incumbent upon the community college to make appropriate adjustments in its local graduation requirements.

3. Transfer of Associate in Fine Arts degree course credits

Upon admission to another public two-year institution or to a public university, a community college student who was enrolled in an associate in fine arts degree program and who satisfactorily completed the courses with a grade of "C" or better in all courses that are designated for college transfer will receive credit for those courses. The receiving institution will determine whether the course will count as general education, major, or elective credit. Because the AFA curriculum standard includes only 28 SHC for general education (see Appendix G), AFA students who transfer must meet the general education requirements of the receiving institution.

4. Transfer of Associate in Applied Science degree course credits

Upon admission to another public two-year institution or to a public university, a community college student who was enrolled in an associate in applied science (AAS) degree program and who satisfactorily completed the courses with a grade of "C" or better in all courses that are designated for college transfer will receive credit for those courses.

Articulation of associate in applied science degree programs will be handled on a bilateral articulation agreement basis rather than on a statewide basis. Under bilateral agreements, individual universities and one or more community colleges may join in a collaborative effort to facilitate the transfer of students from AAS degree programs to baccalaureate degree programs.

The TAC will maintain a current inventory of bilateral articulation agreements for AAS degree programs. These agreements will serve as models to encourage the development of new articulation agreements among institutions.

5. Transfer of courses on a course-by-course basis

Upon admission to another public two-year institution or to a public university, a community college student who was enrolled in a community college course and who satisfactorily completed the course with a grade of "C" or better in the courses that are designated for college transfer will receive credit for those courses. The receiving institution will determine whether the course will count as general education, major, or elective credit.

6. Transfer of courses not originated at North Carolina community colleges

Transfer credit for courses that originate at a UNC institution or independent college or university that is part of the CAA is acceptable as part of a student's successfully completed general education core or associate in arts or associate in science program under the CAA.

Transfer courses that do not originate at a NC community college may be used under the CAA with the following stipulations:

- a. Courses must be from a regionally accredited (e.g., SACS) institution of higher education; and
- b. Courses must meet general education requirements; and
- c. Courses may total no more than 14 semester hours of credit of the general education core.
- d. For courses not originating at a NC community college, if the courses are used to complete the AA or AS or the 44-hour general education core, the courses will be taken as a complete package. Otherwise, if 14 hours or less are presented without completion of the core of AA or AS, then the receiving institution will consider the courses on a course-by-course basis.

Advanced Placement (AP) course credits, awarded for a score of three or higher, are acceptable as part of a student's successfully completed general education core under the CAA. Credit for two successive courses can only be awarded with a score of five. Only one course of credit (MAT 271 for four credit hours) may be awarded for the AP Calculus AB exam with a score of three, four, or five; two courses of credit (MAT 271 and 272 for eight credit hours) may be awarded for the AP Calculus BC exam with a score of three, four or five. Students who receive AP course credit at a community college but do not complete the general education core will have AP credit awarded on the basis of the receiving institution's AP policy. Transferred-in courses from institutions other than North Carolina community colleges are not a part of this agreement.

All College Level Examination Program (CLEP) credit will be evaluated on the basis of the receiving institution's policy.

C. Impact of the CAA on articulation agreements in effect prior to Fall 1997

Effective Fall 1997, the CAA took precedence over bilateral articulation agreements established between constituent institutions of The University of North Carolina and the North Carolina Community College System but did not necessarily preclude such agreements. Institution-to-institution articulation agreements that fall within the parameters of the CAA and enhance transferability of students from community colleges to senior institutions are encouraged. Institutional articulation agreements conflicting with the CAA are not permitted.

V. APPENDICES

Appendix A

Originating Legislation

HB 739 and SB 1161

GENERAL ASSEMBLY OF NORTH CAROLINA
1995 SESSION
RATIFIED BILL

CHAPTER 287
HOUSE BILL 739

AN ACT TO SIMPLIFY THE TRANSFER OF CREDIT BETWEEN NORTH CAROLINA INSTITUTIONS OF HIGHER EDUCATION.

Section 1. The Board of Governors of The University of North Carolina and the State Board of Community Colleges shall develop a plan for the transfer of credits between the institutions of the North Carolina Community College System and between the institutions of the North Carolina Community College System and the constituent institutions of The University of North Carolina. The Board of Governors and the State Board of Community Colleges shall make a preliminary report to the Joint Legislative Oversight Committee on Education prior to March 1, 1996. The preliminary report shall include a timetable for the implementation of the plan for the transfer of credits.

Sec. 2. It is the intent of the General Assembly to review the plan developed by the Board of Governors and the State Board of Community Colleges pursuant to Section 1 of this act and to adopt a plan prior to July 1, 1996, for the transfer of credits between the institutions of the North Carolina Community College System and between the institutions of the North Carolina Community College System and the constituent institutions of The University of North Carolina.

Sec. 3. The State Board of Community Colleges shall implement a common course numbering system, to include common course descriptions, for all community college programs by June 1, 1997. A progress report on the development of the common course numbering system shall be made to the Joint Legislative Oversight Committee on Education by March 1, 1996.

Sec. 4. This act is effective upon ratification.

In the General Assembly read three times and ratified this the 19th day of June, 1995.

Dennis A. Wicker
President of the Senate

Harold J. Brubaker
Speaker of the House of Representatives

GENERAL ASSEMBLY OF NORTH CAROLINA
1995 SESSION
RATIFIED BILL

CHAPTER 625
SENATE BILL 1161

AN ACT TO IMPLEMENT THE RECOMMENDATION OF THE JOINT LEGISLATIVE EDUCATION
OVERSIGHT COMMITTEE TO IMPLEMENT AND MONITOR THE PLAN FOR THE TRANSFER OF
CREDITS BETWEEN NORTH CAROLINA INSTITUTIONS OF HIGHER EDUCATION.

Whereas, it is in the public interest that the North Carolina institutions of higher education have a uniform procedure for the transfer of credits from one community college to another community college and from the community colleges to the constituent institutions of The University of North Carolina; and

Whereas, the Board of Governors of The University of North Carolina and the State Board of Community Colleges have developed a plan for the transfer of credits between the North Carolina institutions of higher education; and

Whereas, the General Assembly continues to be interested in the progress being made towards increasing the number of credits that will transfer and improving the quality of academic advising available to students regarding the transfer of credits; Now, therefore,

Section 1. The Board of Governors of The University of North Carolina and the State Board of Community Colleges shall develop a plan to provide students with accurate and understandable information regarding the transfer of credits between community colleges and between community colleges and the constituent institutions of The University of North Carolina. The plan shall include provisions to increase the adequacy and availability of academic counseling for students who are considering a college transfer program. The Board of Governors and the State Board of Community Colleges shall report on the implementation of this plan to the General Assembly and the Joint Legislative Education Oversight Committee by January 15, 1997.

Sec. 2. The Board of Governors and the State Board of Community Colleges shall establish a timetable for the development of guidelines and transfer agreements for program majors, professional specializations, and associate in applied science degrees. The Board of Governors and the State Board of Community Colleges shall submit the timetable and report on its implementation to the General Assembly and the Joint Legislative Education Oversight Committee by January 15, 1997.

Sec. 3. The State Board of Community Colleges shall review its policies and rules and make any changes in them that are necessary to implement the plan for the transfer of credits, including policies and rules regarding the common course numbering system, Combined Course Library, reengineering initiative, and the system wide conversion to a semester-based academic year. The necessary changes shall be made in order to ensure full implementation by September 1, 1997.

Sec. 4. This act is effective upon ratification.

In the General Assembly read three times and ratified this the 21st day of June, 1996.

Dennis A. Wicker
President of the Senate

Harold J. Brubaker
Speaker of the House of Representatives

Appendix B

Purpose and History

I. Purpose

The CAA was developed jointly by faculty and administrators of the North Carolina Community College System and The University of North Carolina based on the proposed transfer plan approved by both governing boards in February 1996.

The provisions of the originating legislation are consistent with the strategic directions adopted by The University of North Carolina Board of Governors, the first of which is to "expand access to higher education for both traditional and non-traditional students through...uniform policies for the transfer of credit from community colleges to constituent institutions...development of electronic information systems on transfer policies, off-campus instruction, and distance education...[and] increased collaboration with other education sectors..." Similarly, the State Board of Community Colleges has established the education continuum as one of seven critical success factors used to measure the performance of programs consistent with the workforce development mission of the North Carolina Community College System. College-level academic courses and programs have been a part of the mission and programming of the North Carolina Community College System from its inception in 1963.

The Board of Governors and the State Board of Community Colleges are committed to further simplifying the transfer of credits for students and thus facilitating their educational progress as they pursue associate or baccalaureate degrees within and among public post-secondary institutions in North Carolina.

II. History

The two Boards approved a "Proposed Plan to Further Simplify and Facilitate Transfer of Credit Between Institutions" at their meetings in February 1996. This plan was submitted as a preliminary report to the Joint Legislative Education Oversight Committee in March 1996. Since that time, significant steps have been taken toward implementation of the transfer plan. At their April 1996 meetings, the Boards appointed their respective sector representatives to the Transfer Advisory Committee to direct, coordinate, and monitor the implementation of the proposed transfer plan. The Transfer Advisory Committee membership is listed in Appendix D.

Basic to the work of the Transfer Advisory Committee in refining transfer policies and implementing the transfer plan has been the re-engineering project accomplished by the North Carolina Community College System, especially common course names, numbers, credits, and descriptions. The Community College Combined Course Library includes approximately 3,800 semester-credit courses written for the associate degree, diploma, and certificate programs offered in the system. Colleges select courses from the Combined Course Library to design all curriculum programs.

Of approximately 700 arts and sciences courses within the Combined Course Library, the faculty and administrators of the community colleges recommended approximately 170 courses as appropriate for the general education transfer core. The Transfer Advisory Committee then convened a meeting on May 28, 1996, at which six University of North Carolina faculty in each of ten general education discipline areas met with six of their professional counterparts from the community colleges. Through

a very useful and collegial dialog, these committees were able to reach consensus on which community college courses in each discipline were acceptable for transfer to University of North Carolina institutions as a part of the general education core. This list of courses was distributed to all University of North Carolina and community college institutions for their review and comments. Considering the recommendations of the general education discipline committees and the comments from the campuses, the Transfer Advisory Committee established the list of courses that constitutes the general education transfer core. This general education core, if completed successfully by a community college student, is portable and transferable as a block across the community college system and to all University of North Carolina institutions.

With the establishment of the general education core as a foundation, joint academic disciplinary committees were appointed to draw up guidelines for community college curricula that will prepare students for intended majors at University of North Carolina institutions. Each committee consisted of representatives from each UNC institution offering such major programs and eight to ten representatives from community colleges. The Transfer Advisory Committee distributed the pre-majors recommended by the faculty committees to all University of North Carolina and community college institutions for their review and comments. Considering the faculty committee recommendations and the campus comments, the Transfer Advisory Committee established pre-majors which have significant numbers of transfers from the community colleges to the University of North Carolina institutions.

The special circumstances surrounding transfer agreements for associate in applied science programs, which are not designed for transfer, require bilateral rather than statewide articulation. Special circumstances include the different accreditation criteria for faculty in transfer and non-transfer programs, the different general education requirements for transfer and non-transfer programs, and the workforce preparedness mission of the technical/community college AAS programs.

A major element in the proposed transfer plan adopted by the two boards in February 1996 is the transfer information system. Simultaneously with the work being done on the general education and professional specialization (major) components of the transfer curriculum, the joint committee on the transfer information system laid out a plan, approved by the Boards of The University of North Carolina and the North Carolina Community College System, "to provide students with accurate and understandable information regarding the transfer of credits...[and] to increase the adequacy and availability of academic counseling for students who are considering a college transfer program." In addition to the printed publications currently being distributed to students, transfer counselors, admissions directors, and others, an electronic information network provides (1) electronic access to the articulation database which will include current transfer policies, guidelines, and on-line catalogs for public post-secondary institutions; (2) computerized common application forms, which can be completed and transmitted electronically along with transcripts and other education records; and (3) an electronic mail network for transfer counselors and prospective transfer students. Access to the e-mail network is available in the transfer counselors' offices and other selected sites on campuses.

The final element of the transfer information system is the Transfer Student Academic Performance Report. This report, recently refined with suggestions from community college administrators, is sent annually to each community college and to the State Board of Community Colleges. These data permit the rational analysis of transfer issues and are beneficial to students and to educational and governmental decision-makers. This performance report provides the important assessment component necessary for evaluating and improving the transfer process.

Appendix C

Transfer Advisory Committee Procedures

Because articulation between the North Carolina Community College System and The University of North Carolina is a dynamic process, occasional modifications to the CAA may be necessary. These modifications may include the addition, deletion, and modification of courses on the transfer list, addition and revision of pre-majors, and changes in course designation from general education core to electives. The TAC will receive requests for modification only upon the recommendation of the chief academic officer of the NCCCS or UNC. Additions, deletions, and modifications may be subject to faculty review under the direction of the TAC. Because the modification process involves faculty and administrative review, this process may require up to 12 months for final action.

Course work detailed under the CAA general education core or under approved pre-majors will be accepted as agreed upon. Questions arising over the use of electives in meeting institution-specific graduation requirements may be appealed to the chief academic officer of the receiving institution.

Procedure to Recommend Revision to the Transfer Course List

Occasional revisions to the list of community college courses approved for transfer are necessary. Consequently, the following procedures will be used to recommend that specific revisions be made to the CAA.

Revised Status of Course

Pre-Major/Elective Course Status to General Education Core Course Status

Courses already identified on the list of approved transfer courses as pre-major/electives will be recommended as general education core courses following this procedure:

1. The Chief Academic Officer (CAO) of any subscribing institution submits a written request for a change in course status to the CAO of the respective system. The request should include the rationale for the revised status.
2. The system CAO then submits the request for action to the Transfer Advisory Committee (TAC) thirty days prior to the TAC meeting.
3. The TAC reviews the request. Any member of the TAC may request that a course be referred to the Faculty Review Committee. For all courses that are approved unanimously, the committee records their action and rationale of action.
4. The North Carolina Community College System Office will distribute notification of action taken to the requesting college or to the entire North Carolina Community College System, if applicable. The UNC General Administration will distribute notice of actions as appropriate to its campuses.

Addition/Deletion of Courses on Transfer List

Because of accrediting issues and/or substantial impact of college transfer programs system-wide, courses in the Combined Course Library that are not on the transfer list will be recommended for inclusion or courses that are on the transfer list and that will be recommended for deletion will use the following process:

1. The CAO of any subscribing institution submits a written request to the CAO of the respective system for the addition of a course to the transfer list either as a pre-major/elective or as a general education core course or the removal of a course from the list.
2. The NCCCS Office acts on a community college request by soliciting a response from all community colleges approved to offer the course, and a two-thirds favorable response is required for the change to be pursued. The CAO at UNC may seek input from its respective campuses as he/she deems appropriate.
3. The system CAO then submits the request for action to the TAC thirty days prior to the TAC meeting.
4. The TAC reviews the request. Any member of the TAC may request that a course be referred to the Faculty Review Committee. For all courses that are approved unanimously, the committee records their action and rationale of action.
5. The NCCCS Office will distribute notification of action taken to the requesting college or to the entire North Carolina Community College System, if applicable. The UNC General Administration will distribute notice of actions as appropriate to its campuses.

Addition of a new course from the Combined Course Library (CCL) to the Transfer Course List

Colleges often respond to their community needs by proposing the addition of new courses from the CCL. When these proposed courses are intended to be used in Associate in Arts (AA), Associate in Science (AS) or Associate in Fine Arts (AFA) programs, the following process should be used:

1. The CAO of a community college submits a written request to the Senior Vice President of Academic and Student Services for the addition of a new course to the CCL. This request should also indicate that the proposed course should be considered for addition to the Transfer Course List.
2. The NCCCS Office staff prepares the request of the addition of the CCL course for the review by the Curriculum Review Committee (CRC).
3. The CRC will decide if the course is appropriate as an addition for the CCL.
4. If the CRC's action is favorable, the Senior Vice President of Academic and Student Services will submit the request for action to the TAC thirty days prior to the TAC meeting.

5. The TAC reviews the request. Any member of the TAC may request that a course be referred to the Faculty Review Committee. For all courses that are approved unanimously, the committee records their action and rationale of action.
6. If the CRC approves the addition of the new course to the CCL but the TAC does not approve the addition of the course to the Transfer Course List, then the course will be designated for AAS use only or removed from the CCL depending on the intent of the initial request.
7. The North Carolina Community College System Office will distribute notification of action(s) taken to the requesting college or to the entire North Carolina Community College System, if applicable.

The Faculty Review Process

Any member of the TAC may request that a course under consideration be forwarded to the Faculty Review Committee. The Faculty Review Committee will be asked to review the course and the proposed action.

1. The Faculty Review Committee will consist of the following representatives:
 - a. 3 UNC faculty members
 - b. 3 NCCCS faculty members
2. Representation across all the general education core areas including, but not limited to: English; humanities/fine arts; natural sciences and mathematics; and social/behavioral sciences.
3. Appointments to the committee will be for three years but may be renewed.
4. The Faculty Review Committee will receive a request to review a course(s) from the assigned representative(s) of the TAC within one week of the TAC meeting where the request was made.
5. Faculty will be asked to forward their comments, suggestions, and recommendations to one faculty representative from each sector. These three faculty members will then forward a composite report and recommendation to the assigned representative(s) of the TAC prior to the next scheduled TAC meeting.

The assigned representative(s) of the TAC will report the results of the Faculty Review Committee at the next TAC scheduled meeting for action.

Approval of the requested action will require a majority of the TAC members.

Appendix D

Transfer Advisory Committee

NCCCS Members

Dennis King, *Appointed 1996, Co-chair*

Vice President for Student Services

Asheville-Buncombe Technical Community College

340 Victoria Road

Asheville, NC 28801

dking@abtech.edu

Phone: 828-254-1921, Ext. 140

Fax: 828-251-6718

Cell: 828-279-9976

Elizabeth Spragins, *Appointed 2008*

Program Coordinator, Program Services

North Carolina Community College System

5016 Mail Service Center

Raleigh, NC 27699-5016

spragins@nccommunitycolleges.edu

Phone: 919-807-7212

Fax: 919-807-7164

Johnnie R. Simpson, *Appointed 2001*

Vice President for Instruction

Richmond Community College

PO Box 1189

Hamlet, NC 28345

johnnies@richmondcc.edu

Phone: 910-410-1855

Fax: 910-582-7163

Richard E. Swanson, *Appointed 2003*

Professor of Physics

Sandhills Community College

3395 Airport Road

Pinehurst, NC 28374

swansonr@sandhills.edu

Phone: 910-246-4951

Fax: 910-246-4113

UNC Members

Kathi M. Baucom, *Appointed 2006, Co-chair*

Associate Provost for Enrollment Management

122 Cato Hall, Enrollment Management

University of North Carolina at Charlotte

Charlotte, NC 28223-0001

kmbaucom@uncc.edu

Phone: 704-687-7019

Fax: 704-687-6228

David English, *Appointed 2009*

Director, CFNC Technology and Internet Services

University of North Carolina- General Administration

140 Friday Center Drive

Chapel Hill, NC 27517

englishdj@northcarolina.edu

Phone: 919-843-5369

Fax: 919-843-5903

Kenneth R. Gurganus, *Appointed 2005*

Assistant Professor

University of North Carolina Wilmington

220 Bear Hall

Wilmington, NC 28403-3297

gurganus@uncw.edu

Phone: 910-962-3297

Fax: 910-962-7107

Lou Riggans, *Appointed 2009*

Director of the Transfer and Advisement Center

Fayetteville State University

1200 Murchison Road

Fayetteville, NC 28301

lriggans@uncfsu.edu

Phone: 910-672-2286

Fax: 910-672-2115

Staff

Appendix E

Comprehensive Articulation Agreement (CAA) Grievance Procedure

A student may file a grievance within the first six weeks of the beginning of the term for which admission was offered at the college or university. The student may terminate the grievance procedure at any point.

Step 1: Student obtains a CAA Student Grievance Form from the admissions office of the college or university to which he/she was admitted. From the date the form is received, the student will receive a reply within 45 days.

Step 2: On the form, the student will specify the nature of the complaint, citing specific language of the CAA which is in contention, and will submit the form with any relevant supporting documents to his/her transfer counselor or advisor at the community college. This individual will route the form to the community college's designated grievance official (CCDGO) for signature and comments. Depending on the structure at the community college, this will likely be either the chief student affairs officer or chief academic affairs officer. The CCDGO will complete the appropriate section with signature and comments and forward the form along with any relevant supporting documents back to the director of admissions at the college or university (copy to the Chief Academic Affairs Officer at the university).

Step 3: Upon receipt of the form, the director of admissions will conduct a thorough investigation to include contacting the student and the CCDGO.

Step 4: The director will forward the form with a consensus interpretation and recommendation for action to the Associate Vice President for Academic and Student Affairs of The UNC (AVP-UNC).

Step 5: After a discussion with the director of admissions, the CCDGO and/or the student, the AVP-UNC will propose a final decision to the TAC co-chairs. If the chairs concur with the recommendation, the matter is resolved, and the AVP-UNC will inform all interested parties. If the TAC chairs do not concur, the matter will be referred to the full TAC for action.

Step 6: On at least an annual basis, the AVP-UNC will present a report to the TAC on the number and nature of these grievances, discussions, and the decisions. If the CAA needs to be modified to reflect any actions taken, the TAC will do so in a timely fashion.

Appendix F

Associate in Arts and Associate in Science Curriculum Standards and Pre-Majors

Associate in Arts (A10100)		Associate in Science (A10400)	
A 10 10 X	Anthropology	A 10 40 A	Biology and Biology Education
A 10 10 A	Art Education	A 10 40 B	Chemistry and Chemistry Education
A 10 10 B	Business Administration, Accounting, Economics, Finance and Marketing	A 10 40 D	Engineering
A 10 10 C	Business Education and Marketing Education	A 10 40 E	Mathematics
A 10 10 O	Communication/Communication Studies	A 10 40 F	Mathematics Education
A 10 10 T	Computer Science		
A 10 10 D	Criminal Justice		
A 10 10 R	Elementary Education		
A 10 10 E	English		
A 10 10 F	English Education		
A 10 10 G	Health Education		
A 10 10 Y	Geography		
A 10 10 H	History		
A 10 10 V	Information Systems		
A 10 10 U	Liberal Studies		
A 10 10 W	Mass Communication/Journalism		
A 10 11 A	Middle Grades		
A 10 10 I	Nursing		
A 10 10 J	Physical Education		
A 10 10 K	Political Science		
A 10 10 L	Psychology		
A 10 10 M	Social Science Secondary Education		
A 10 10 Q	Social Work		
A 10 10 N	Sociology		
A 10 10 Z	Special Education		

The AA and AS standards can be located at:

http://www.northcarolina.edu/content.php/assessment/reports/student_info/caa.htm

Appendix G

Associate in Fine Arts Curriculum Standards and Pre-Majors

Associate in Fine Arts (A10200)

A 10 20 A	Art
A 10 20 C	Drama
A 10 20 D	Music and Music Education

The AFA standards can be located at:

http://www.northcarolina.edu/content.php/assessment/reports/student_info/caa.htm

Appendix H

Transfer Course List

The Transfer Course List can be located at:

http://www.northcarolina.edu/content.php/assessment/reports/student_info/caa.htm