

ARTICULATION AGREEMENTS: ACADEMIC SUCCESS, PERSISTENCE AND
GRADUATION FROM ONLINE AND FACE-TO-FACE
DEGREE COMPLETION PROGRAMS

By

Darnette Louise Hall

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this causal-comparative study is to examine whether differences exist in the retention and persistence of articulation participants based on face-to-face or online degree completion. The study will determine the rate of completion of articulation participants who transfer from a North Carolina Community College to a state university in North Carolina and enroll in traditional face-to-face classes versus articulation participants who enroll in online degree completion. There is considerable literature on articulation from the perspective of student satisfaction and an administrator's perception. Substantial research on policies and procedures as well as comparison to native and transfer students. There is limited data on the persistence of articulation students based on the degree completion method. This study examines two homogenous groups, the independent variable (online and face to face degree completion program) to determine the significance of dependent variables: time to degree obtainment, grade point average and degree completion. The results of this study revealed that articulation students who enrolled in an articulation programs, online versus face-to-face degree completion, had a significant difference in time to degree obtainment in favor of online degree completion. Students in both online and face-to-face obtained similar grade point averages and graduation completion rates indicating no significant difference. One hypothesis tests rejected the null hypothesis of no difference between online and face-to-face degree completion participation groups. The study also provides descriptive statistics, data on stop outs with academic standing, withdrawals and total of institution attended.

Keywords: articulation agreements, bilateral agreements, degree completion programs

Dedication/Acknowledgments

I would like to thank the Lord for always keeping me focused, encouraged and determined. I would also like to thank everyone who helped me in my journey. Special thanks to Dr. Amy McLemore my dissertation chair, and my committee members Dr. DeSandra Washington and Dr. Tamika Hibbert. I would like to thank my sons Christian McLean and Brandon Johnson for their patience, support and understanding during this long journey.

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CHAPTER ONE: INTRODUCTION

Today, many students are searching for the most economical, convenient and, expeditious way to earn a baccalaureate degree. Some students are opting to attend a community college, others a university, and some are electing to attend both through transfer articulation agreements. Articulation comes in many formats: high school to college, community college to university, bilateral agreements (specific program articulation), 2+2 articulation, 3+1 articulation and the recently developed reverse articulation. The reverse articulation agreement allows students who transfer to a college or university before completing their associate's degree to be able to transfer the credits back to the community college to complete their associated degree. Each articulation agreement has a common purpose, to facilitate a smooth seamless matriculation to graduation that will benefit both educational institutions. Articulation agreements have been established between community colleges and universities to develop collaborative relationships and to assist students in the completion of a baccalaureate degree (Smith, 2007). The articulation agreement is a formal document that outlines the curriculum, the equivalencies, how the courses will be offered, and the process by which institutions of higher learning agree to accept courses that will transfer to another institution. Community college students follow the agreed upon curriculum to ensure that the credit hours completed will transfer into a baccalaureate program (Reese, 2002).

Articulation opportunities can be offered in different formats and learning methods, online, face-to-face or hybrid. A student can dually enroll or simultaneously enroll, which allows them to take classes at both the community college and university concurrently or take classes at one institution or the other (Falconetti, 2009). The term dual enrollment is often used when high school students enroll in an accelerated program to earn college credit while still in high school. The same premise works for community college students wanting to get an early

start on their upper level courses at a four year institution while completing their associated degree. A dual enrollment student can be concurrently enrolled in two separate schools.

In addition, students have the option of completing their courses on campus or enrolling in an online degree completion program, depending upon the articulation agreement.

Articulation agreements and online education are growing in popularity among institutions of higher education. The combination of articulation agreements and online degree completion has essentially opened up a new avenue to achieving a four year degree (Bontrager, Clemstein, & Watts, 2005). Community college transfer students have an opportunity to complete their degree online, on campus or a mixture at a four year institution. This provides more advantages for students and more opportunities for higher education to attract students. It allows the university to accept more students without the worries of providing additional housing and accommodations. Students are allowed the freedom, flexibility and convenience of online learning with the advantages of being a part of consortium agreement.

Whatever enrollment option students select to follow, the articulation agreement will permit them to transfer in more community college credit hours. In addition to the Associates of Arts-College Transfer, popular college transfer degrees are criminal justice, business administration, nursing, psychology and education. Basic core classes along with introductory classes in the selected degree program are taken at the community college with the major core taken at the four year program. In addition, the articulation agreement decreases the lengthy process of transcript evaluation because students are aware in advance as to how the courses will transfer because course equivalencies are included in the articulation agreements degree plan (Bontrager, Clemstein & Watts, 2005). These options allow students the flexibility to complete the degree in a manner that is cost effective and convenient.

In today's world of higher education students are not pursuing education in the traditional form by choosing a college from high school and sticking with it. Students seem to be changing institutions and flowing back and forth between different community colleges, community college and universities, university to community college and even university to university. This action known as student swirl seems to be growing as students are seeking out the courses at various institutions that meet their financial and academic needs (Borden, 2004). Articulation agreements are a positive way to accommodate student swirl. Students who attend several colleges can still benefit from a dedicated degree plan with the community college system. Through the use of an agreement, a student can concentrate on completing specific courses and less about where the course originates from. As long as the courses are completed as specified in the agreement, with the last 30 hours or at least 30 hours completed at the degree granting institution, a student may be able to swirl back and forth between colleges. Swirl is not without issues for concern. Colleges are concerned with retention rates and swirl can cause non completers. Faculty is concerned about students having a cohesive education and of course student services are concerned with students being properly advised and following financial aid guidelines (Bailey, 2003). Student cannot receive financial aid at more than one institution at a time.

The choice of different learning formats in conjunction with articulation creates an area for research on persistence based on degree completion method. This study will look at articulation participants to determine if instructional method (degree completion online or face-to-face) has an effect on degree completion. This literature will review areas in the articulation and transfer process that affect academic success, persistence and retention to degree completion as well as online versus face-to-face learning. A causal comparative design will be used to

determine if bilateral articulation participants, community college students who transferred from one of 14 community colleges in partnership with a state university in North Carolina, have any significant differences based on whether they are completing an online degree completion versus on campus degree completion in time to degree obtainment, grade point average and graduation rates.

Background

Although 71 percent of entering community college students anticipates earning a bachelor's degree, only 25 percent transfer to a four-year institution (AASCU, 2005). Articulation programs allow students to develop relationships early and receive immediate support from the university liaison. These relationships create a smooth transition from community college to four year institution. Vincent Tinto (1993) dictated that programs designed to specifically help transfer students academically would lead to a higher rate of degree completion. A positive transition can increase student motivation and provide support that encourages student retention (Tinto, 1993). Institutions are looking to increase enrollment and retention rates, decrease spending and streamline operations (Anderson, Alfonso, & Sun 2006). Universities and community colleges are looking for degree completion and some institutions have utilized articulation agreements to increase enrollment and graduates. Articulation agreements are a way to seamlessly guide community college students into four year degree programs. The implementation of dual enrollment programs can reduce the average time-to-degree attainment and increases the likelihood of graduation for the students who participate in these programs (Karp & Hughes, 2008).

There is substantial evidence on the positive effects of dual enrollment/articulation programs. Poole (2011) states that the program increases academic performance and educational

attainment in the high school to college program. This study will determine if academic performance and degree attainment are also positive in community college to university programs as it looks into the effectiveness of degree completion methods that are built into the articulation program. The students in this study have the opportunity to complete their degree face to face, hybrid or through an online degree completion program.

Problem Statement

The success of the students who enroll in articulation programs is of importance to the university and community college. Universities have recognized that it is beneficial to engage in collaborative relations with community colleges in order to funnel transfer students into their degree programs (Amey, 2007). The partnership can benefit the student and both institutions as the collaboration may produce more completers and grow enrollment. A great deal of resources and manpower is utilized to keep articulation programs operational at both the community college and four year institution (Bers, 2013). Performance, enrollment, and graduation data is essential in determining program effectiveness. Specifically, to determine if one format (online or face-to-face) proves more effective in producing graduates than the other. Institutions of higher learning that offer articulation programs are interested in the success of the program as well as student academic success and persistence (Bontrager et al., 2005).

Establishing and maintain relationships between the community college is essential. There are many meetings between Deans, department chairs and administration that are involved in establishing an articulation agreement. The real work starts after the ink dries. It is the collaborative effort from instructors, university liaison, advisors and department chairs at both institutions to make this a smooth running process. Articulation agreements are more than a recruiting tool; they are a line of communication. Conversations and meetings often occur to

suggest changes or obtain clarification. University faculty will get to know their counterparts at the community college who will in turn be confident in recommending a particular program to their students who are interest in pursuing a four-year degree.

Students face challenges and barriers when trying to attain an undergraduate degree. Time management and the rigor of class assignments can be overwhelming. In addition, transfer students experience challenges with integration and course transfer when transitioning from community college to university. Previous research has shown there is a lack of comprehensive data systems to determine how articulation participants progress and there is a need for statistical methods and evaluations (Karp, 2007). Certain data should be tracked to determine retention and persistence of students enrolled in articulation programs. There should be comprehensive data to show if students were able to maintain their grade point average once enrolled at the university, how many graduated, dropout rates and time to degree attainment. The problem of this study is to determine whether students are successfully completing articulation programs and matriculating to graduation. This study will explore online and face-to-face degree completion methods to determine if there is any significant difference in student outcomes. The study will also review the articulation process and procedures as it relates to student persistence and retention.

Purpose Statement

The purpose of this causal-comparative study is to examine whether differences exist in the retention and persistence of articulation participants based on the instructional delivery method used for degree completion. The study will determine the rate of completion of bi-lateral articulation participants who transfer from a North Carolina Community College (NCCCS) to a state university and enroll in traditional face-to-face classes, versus articulation participants who

enroll in online degree completion. The causal-comparative research design involves no direct manipulation of the factors in the study. The action has already occurred and available data from the university data system will be utilized for the study.

Significance of Study

There is considerable literature on articulation agreements from the perspective of student satisfaction and administrator perception (Schmitgal, 2009, Slotnick, 2010). Substantial research is available on policies and procedures as well as comparison to native and transfer students (Tenbergen, 2010). Research has also been conducted on specific majors, articulation models and development (Davis, 2009, Perkins 2010). There is limited data on the persistence of articulation students based on the degree completion method, which thus poses a gap in the literature. This study is significant because it focuses on students who have successfully matriculated to a university taking similar curriculums but pursued different means of instructional delivery. The objective is to determine the impact of learning method on student success and program effectiveness. The research will also look at factors effecting transfer retention and academic success. The effectiveness of the program can directly affect the transfer process, retention, graduation and funding for recruitment.

In a study on the academic and social adjustments of transfer students by Laanan (2007), 700 students were surveyed who transferred to a single four-year institution to determine factors that impact transfer. The findings indicate that four-year institutions must provide high-quality educational experiences that ease transition for the new transfer student. They must provide programs and resources for students to succeed at the four year institution. Resources include dedicated transfer staff, student success programs to include orientation programs, tutoring, supplemental instruction, and counseling. Student organizations and clubs that serve non-

residential transfer students such as commuters clubs are essential. The study also stated that productive students-faculty engagement can alleviate the anxiety related to transfer adjustment and student retention (Laanan, 2007). Community colleges also can help by having faculty provide a rigorous curriculum that prepares students for transfer and counselors who are familiar with the resources available to transfer students.

Baccalaureate degree attainment is the main focus of transfer students and if there are substantial indicators why students are not persisting they should be explored (College Board, 2012). The study will include descriptive statistics, student completions and data on students who stop out, withdraw or placed on academic suspension from the program. The merits of the study could influence program design and course delivery; to include hybrid, onsite courses, and weekend and program design for articulation participants and transfer students. The study will also provide time to degree obtainment and information on students' ability to maintain academic standing after transferring to four year degree program.

This study will provide significant information, as both NCCCS and UNC system have invested greatly in offering agreements in a wide variety of majors to students. According to a report on Bilateral Agreement Inventory by the NCCCS/UNC Transfer Advisory Committee, (2009), all 58 NC Community Colleges have an agreement with at least one or more universities in the UNC system with several NC community colleges having 30 or more agreements. According to the UNC-GA distance education inventory, the UNC system offers a total of 342 online programs through its 16 institutions (Northcarolina.edu). Coordination between articulation and online programs can prove to be a market for greater enrollment.

Research Questions

The following exploratory questions guide the analysis of information to describe and explain articulation participant persistence and retention based on their degree completion method.

1. Can articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method?
2. Is there difference in grade point average based on online or face-to-face degree completion method?
3. Is there difference in graduation rates based on online or face-to-face degree completion method?

Null Hypothesis

Null hypothesis 1: There is no significant difference in time to degree attainment for online and face to face articulation participants.

Null hypothesis 2: - There is no significant difference in grade point average for online and face to face articulation participants.

Null hypothesis 3: There is no significant difference in baccalaureate graduation rates for online and face to face articulation participants.

Identification of Variables

Causal comparative design is a non-experimental research technique in which preexisting groups are compared on some dependent variable. It compares two or more groups of individuals with similar backgrounds who were exposed to different conditions as a result of past events (Lammers & Badia, 2005). The independent variables are the two groups of articulation participants. One being the group of students who are completing their degree face to face and

the other group are online degree completion. The groups will be compared based on dependent variables of time to degree obtainment, grade point average and graduation rates at the state university.

Definition of Terms

Articulation Agreements: Formal agreements, often contractual in nature, governing the terms of credit transfer between educational institutions such as colleges (Reese, 2002).

Articulation Process. A process that encompassed the tenets of articulation whereby a student transferred with an academic associate degree, with sixty to ninety cumulative credit hours, and

Attrition: a student's departure from the school (and possible departure from the entire educational system). The departure could be either a voluntary or involuntary decision on the part of the student. The opposite of attrition is persistence or retention.

Community College: A public regionally accredited institution that awards the associates degree as its highest degree (Cohen & Brawer, 2008).

Degree Completion programs: baccalaureate degrees completed at community colleges or at university. Most are based on 2+2 or 3+1 articulation agreements (Schmitigal, 2009).

Drop out: a decision made by a student to leave the school in which they are currently enrolled.

Grade Point Average (GPA): The metric used by the community college to describe a student's academic performance.

Non-traditional Students: college students who are a) non-traditional age (25 and over), b) having adult responsibilities (such as working at a full-time job, being married, or raising a family), and c) attending on a part-time basis, or any combination of the three.

North Carolina Comprehensive Articulation Agreement (CAA): a statewide agreement governing the transfer of credits between North Carolina Community Colleges and NC public universities and has as its objective the smooth transfer of students.

Persistence: a student's decision to continue on with his/her educational program through to graduation. Persistence is the opposite of attrition and is related to retention.

Retention: a student who completes his/her degree program at the institution.

Stop-out: a student's temporary departure from the pursuit of higher education.

Traditional Students: students aged between 18 and 24, and attending school on a full-time basis.

Transfer Shock: the negative drop in GPA performance that can be recognized after transfer to the new institution.

Transfer student: the transfer student is a student who has enrolled previously in any accredited college or university.

Transferred credits: the number of semester hour credits earned at the community college accepted for credit by the four-year institution (Doyle, 2006).

Online classes: consists of taking classes via the internet in the form of asynchronous learning that may utilize technologies such as email, blogs, wikis, and discussion boards, web-supported textbooks, hypertext documents, audio, video courses, and social networking.

Face to face classes: the traditional for of learning that requires regular attendance to classes in person and on campus.

CHAPTER TWO: LITERATURE REVIEW

Introduction

This study examines academic success and retention of articulation agreement participants who are essentially community college transfer students with the advantage of extensive advising, degree planning and financial resources. The research will explore the academic success, persistence and graduation of articulation students enrolled in face-to-face degree completion compared to articulation students enrolled in online degree completion. According to American Association of State Colleges and Universities (AASCU), there is a push for degree completions among institutions of higher learning. The AASCU has initiated Project Degree Completion with the goal of achieving 60% degree attainment by 2025. The initiative consist of reaching out to former students who attended a college or university but did not complete their degree and reducing time to degree attainment. This has great potential for increasing retention and demonstrating concern for students' academic and career success. On a societal scale the benefits are many. Degree completion places more educated personnel in the workforce and students holding bachelor's degrees can earn 40% more than non-degree holders with as much as 84% more over a lifetime (Garmise, 2013).

The literature review will analyze several models on retention, articulation/dual enrollment, issues and barriers to the transfer process, online degree completion, traditional and nontraditional success factors of academic preparation and social connectedness. Articulation agreements provide an improved access, more academic alternative and a seamless pathway to achieve degree completion. Current trends in higher education embrace articulation agreements and memorandums of understandings (MOU) with community colleges/universities; however they are not new in higher education. Partnerships between institutions have been active for over

100 years (Mosholder & Zirkle, 2007). Articulation participants are afforded the opportunity to achieve a degree with specialized program to program membership and the convenience of online learning.

Theoretical Framework

The transfer student is defined as a student who has enrolled previously in any accredited college or university. For some transfer student the path to a four year degree starts at a community college. The eagerness to form partnership between community colleges and universities are growing (O'Meara & Carmichael, 2007). Collaborative agreements between the institutions of higher education has expanded and as a result improved the transfer process for students and more degree programs offerings. Vincent Tinto (1993) dictated that programs designed to specifically help transfer students academically would lead to a higher rate of degree completion.

Articulation participants in this study are matriculated through the North Carolina Community College System (NCCCS) and to a four-year institution in the University of North Carolina System (UNCS). Once transferred, student experiences may differ greatly based on whether they are completing their degree on campus or online. On campus students will have the benefits of interacting face-to-face with faculty, staff, and other students in their same degree program.

Pascarella's General Model for Assessing Change

According to Ernest Pascarella's theory in the General Model for Assessing Change (1985) student adjustments to transfer are related to the direct and indirect effects of an institution's structural characteristics, its environment, and the student's background. The online student will have to be self-sufficient, self-motivated, well organized and have a supportive

environment. Tinto (year) suggests academic and social integration are important to academic retention. A student's social and academic experience at an institution of higher learning will have a greater impact on persistence. These experiences are essential in student success as well as students' goals and level of motivation.

Tinto's Theory

Tinto (1993) identifies three major issues in retention: academic difficulties, the inability of individuals to resolve their educational and occupational goals, and their failure to become or remain incorporated in the intellectual and social life of the institution. Retention issues are evaluated closely by institutions and researched for possible problem areas. It is important to assess the overall process that a student travels through to determine the effectiveness of a program. Tinto's (1993) "Model of Institutional Departure" states that, to persist, students need integration into formal (academic performance) and informal (faculty/staff interactions) academic systems and formal (extracurricular activities) and informal (peer-group interactions) social systems.

Tinto's theories establish an association between faculty support and student retention, this study suggests that colleges need to be more strategic and systematic in finding ways to develop faculty-student interactions for transfer students. The support must be in place in order for transfer programs to work efficiently. Students are easily discouraged if the transfer process seems too difficult or if there is a lack of customer service at the four year institution. The effortlessness of the process will determine student retention, satisfaction and matriculation to graduation (Anderson, Alfonso, & Sun, 2006). The effective principles for retention include an institutional obligation to students. Academic and student success programs must be committed

to the students they serve (Tinto & Russo, 1994). The services provided to students should be seamless, significant, and incorporated with the academic mission of the institution.

Increasing the likelihood of student persisting to graduation is contingent on the universities recruitment and retention plan. Reaching transfer students at an early stage in their academic pursuits give both the student and the university time to build a relationship. Providing students with the academic requirements, social climate, advisement, and assessment prior to transfer takes the apprehension of transfer and eases the probability of transfer shock. Students need to feel that they are wanted, valued, and will fit within the school's environment.

Alexander Astin's I-E-O Model and Theory of Involvement

According to Astin's I-E-O Model and Theory of Involvement (1985), college student outcomes are viewed as functions of three foundations that explain the underlying forces of how students adjustment or progress during the matriculation process. Astin's theory employs that student involvement impacts on student outcomes in college. The main contention is that students must be actively engaged in their surroundings in order to learn and grow in college (Roberts & McNeese, 2010). The primary concepts are inputs, environments and outcomes. The concepts take into account a student background and previous experiences with emphasis placed on current experiences encountered during college. This is in conjunction with a student's knowledge, attitudes, beliefs, values, which exist after college. The concepts are balanced with the hypothesis that involvement is a major component. Involvement or energy placed by the student in their educational pursuits has direct effects to academic success and retention.

Bean and Metzner

Bean and Metzner's (1985) model for the barriers to persistence is well established in the literature and emphasizes factors perceived to influence persistence for nontraditional students.

1. Academic performance
2. Intent to leave
3. Background
4. Defining variables and environmental variables

Bean and Metzner's (1985) theory agreed with Tinto that social and academic integration were important to persistence; however, academic integration was more significant in determining persistence for nontraditional students. Nontraditional students and military are less likely to be impacted by the social aspect of college.

Rationale

Four year institutions established articulation agreements for Associate of Arts (A.A.) and Associate of Science (A.S.) degrees with community colleges to obtain transfer ready students who had completed the core academic classes. Articulation seemed ideal for college transfer degrees; however the agreements were not created for the Associate of Applied Science (A.A.S.) to a Bachelor's of Science degree (Bieber, 2011). A.A.S. degrees were traditionally designed as terminal programs to enable graduates to enter the workforce with the technical skills needed for entry-level positions and, therefore, were not always transferable to academic baccalaureate degrees (Allen, 2011). Articulation bilateral agreements for Associate of Applied Science have provided a new education and career path for transfer students in the fields of business administration, criminal justice technology, early childhood associates, fire protection technology ,and associate's degree in nursing.

The North Carolina Community College System provides two pathways for students who desire to complete a baccalaureate in nursing. One pathway is through the comprehensive articulation agreement between our system and the UNC system, which includes two years of undergraduate study at the community college, followed by two years of professional preparation

in a school of nursing at one of the UNC campuses. The other pathway is an articulation agreement, involving the progression from the ADN program to a bachelor of science in nursing program, which allows graduates of the ADN program to transfer to a university to complete two years of general college course work and capstone nursing courses (Ralls, 2011).

The development of an articulation agreement with a four-year university in an applied science degree opens the door for greater numbers of students who otherwise would not pursue a baccalaureate degree (Allen, 2011). The goal of the partnerships is to meet the demands of the workforce by providing educated, well prepared college transfers who want to pursue a degree beyond the associate's to meet qualifications in today's job market. The majority of new jobs that will be created through the year 2014 will require some postsecondary education (AACCC, 2009).

According to the NCCCS/UNC Transfer Advisory Committee, the special circumstances surrounding transfer agreements for Associate in Applied Science (AAS) programs, which are not designed for transfer, require bilateral rather than statewide articulation (NCCCS, 2009).

Under bilateral agreements, individual universities and one or more community colleges may join in a collaborative effort to facilitate the transfer of students from associate in applied science (AAS) degree programs to baccalaureate degree programs. The special circumstances surrounding transfer agreements for AAS programs, which were not designed to transfer, require bilateral rather than statewide articulation. Special circumstances include different accreditation criteria for faculty in transfer and non-transfer programs, different general education requirements for transfer and non-transfer programs, and the workforce preparedness mission on the technical/community college AAS programs. These agreements facilitate transfer of

coursework not protected by the Comprehensive Articulation Agreement from the AAS degree to selected universities.

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 Transfer Advisory Committee maintains an annual inventory of bilateral articulation agreements for AAS degree programs. These agreements often serve as models to encourage the development of new articulation agreements among institutions.

The North Carolina Comprehensive Articulation Agreement

NCCCS students can be assured their courses will transfer to the UNC System institution. The North Carolina Comprehensive Articulation Agreement (CAA) is a statewide agreement governing the transfer of credits between North Carolina Community Colleges and NC public universities, and has as its objective ensuring a smooth transfer from the community college system to the university system. The CAA provides certain assurances to the transferring student; for example: assures admission to one of the 16 UNC institutions. This agreement 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 (NCCCS, 2013). Students in Associates of Applied Science degree programs are not covered under this agreement but can benefit from transferring in at junior status, however their courses may not meet requirements for transfer in their perspective majors at the four year institution.

The State Board of Community Colleges and the University of North Carolina Board of Governors have been working diligently to revise the CAA, first established in 1997. The new

changes will go into effect for new college transfer students in the fall of 2014. Students currently enrolled in an Associate in Arts (AA) or Associate in Science (AS) program will continue under the existing agreement as long as they remain continuously enrolled. Students under the new program will be assured admissions to one of the UNC schools; however, their first choice is not guaranteed. The new CAA contains universal general education transfer components (UGETC) with additional courses selected from the transfer list. The goal is to have students connect with a four program to select courses needed for that program in advance.

To facilitate the transition as some classes are being changed, replaced, or deleted all together, students will not be penalized for their course selections but they must choose which catalog they are adhering to. The goal is for each individual UNC school to publish their degree plans on a centralized website so students can conduct research on class requirements and selections' on their own. As with bilateral agreements, degree completion plans clear up discrepancies on course equivalencies and requirements. CAA is system wide and must adhere to policies and standards set by the state. More flexibility is allowed with a bilateral agreement. Schools have some flexibility in course acceptance with associates of applied science degrees. "UNC President Tom Ross stated that nearly 24,000 students who began their studies at a community college are now undergraduates on a UNC campus, accounting for more than half of all UNC transfer students" (UNC-GA). "By working together, UNC and the NC Community Colleges can continue to grow that number and better meet North Carolina's future workforce needs. This revised agreement is an important step forward in streamlining the transfer process and providing opportunities for more North Carolinians to attain a baccalaureate degree" (UNC-GA). As the new CAA is implemented institutions on both sides will be viewing how the

changes will affect college transfers ability to meet core class requirements, reduce courses, and continue to provide a more transparent academic pathway.

The two state higher education systems, the community college system and the university system, are governed by different administration thus have different course numbers, curriculum, admissions requirements and course transferability. Florida and Illinois offer a unified system of standard course prefixes, numbers, titles, and credit hours; there is uniformity and clarity across colleges within the state (Bers, 2013). The NCCCS course numbers remain the same throughout all 58 community colleges. North Carolina provides standard course information for community colleges but not for universities. The CAA is a good product to assist students, however it would make a considerable difference to students if the University of North Carolina System had equivalent course numbers within their system would coincide with course numbers at the community college system. According to the National Center for Public Policy and Higher Education (2011), one test of the effectiveness of transfer policies is whether students who transfer from community colleges complete bachelor's degrees with the same number of credit hours as "native students" who receive their lower-division instruction from a four-year college or university.

North Carolina Community College System

A goal of the North Carolina Community College System is to collaborate with the UNC System to foster degree acceleration and student retention thorough the collaboration with the universities presence on community college campuses. Many community colleges have developed partnerships with universities to provide baccalaureate-completion courses on the community college campus (Ralls, 2011). In 2010-2011, the North Carolina Community College System (NCCCS) reported that there are approximately 840,000 students enrolled at one

of the 58 community colleges. Most of the community colleges are within close proximity, separated by a 30-40 mile radius, providing students with convenience, accessibility, and options. Proximity provides availability to higher education more than any other single factor (Cohen, 2008). The North Carolina Community College System is the third largest in the nation, based on the number of colleges. The University of North Carolina General Administration (UNC-GA) oversees 16 North Carolina public institutions and the North Carolina School of Science and Mathematics for gifted 11th and 12th graders. The university system has an estimated annual enrollment of 174, 805 (UNC-GA, 2013).

According to UNC-GA's report to the UNC Board of Governors, most transfer students matriculate from the NCCCS. This is due to their long-standing and nationally recognized articulation agreement. The report states that transfer students originating from the community college sector has continued with steady growth as students transferring from elsewhere have declined (UNC-GA, 2014). In the year 2013, the number of transfer students entering UNC institutions grew to 14,955 over the previous year (+1.4%). The total number of transfer students new to the UNC system saw a slight increase from 12,471 in Fall 2012 to 12,722 in Fall 2013. 2,233 enrolled students are UNC to UNC transfers (-2.0%). NCCCS to UNC transfers increased to 8,383 (+6.0%) with transfers from NC Private Institutions to UNC declined to 1,152 (-1.7%). There was also a decline in out-of-state student transfers to 3,187 (-6.1%) (UNC-GA, 2014).

How well do transfer students do once they transfer to a four-year state institution? The North Carolina Community College Systems office states that 88 percent of associate degree recipients from the system have a grade-point average of 2.0 or better at the University of North Carolina System after two semesters. According to the UNC-GA, college transfer and general

education/technical students transferring in the fall semester 2010-2011, immediately following attendance at a North Carolina Community College, had an 84.5 percent of credit hours completed with passing grade, and 55 percent of students achieved an end-of-year GPA of 3.00 or better (University of North Carolina, 2013).

Who are community college transfer students? The typical community college student is 28 years old and shifting the way they think about their educational and career needs. The students are seeking beyond traditional trade, vocation, certificate, or associates degree. The students are looking beyond the community college to advance degrees. Interestingly, an increasing number of traditional college students enroll in community colleges with the purpose of transferring to a four year university (Miller, Pope, & Steinmann, 2005). Students who know in advance their goal to transfer can enroll in articulation programs to include 2+2 and 3+1 programs and other joint collaborations with one or more universities. A 2+2 agreement is a specific arrangement where a student has a two year plan designated with community college courses and two years with a university. In a 3+1 program students are allowed to take more transferrable classes at the community college and are allowed to take one year (30 credit hours) at the university. Other agreements can be a 2+3 where a student is taking the core classes at one university and transfer to another university for major courses. Engineering is a popular degree program for a 2+3 agreement.

Articulation

The History of Articulation

In 1995, the North Carolina State legislature enacted a comprehensive statewide articulation policy that had been developed by the Board of Governors of the University of North Carolina and the State Board of the Community Colleges (Wellman, 2002). Their goal was to strengthen the community college–baccalaureate transfer function while ensuring the quality of

academic completion for college-level work. The legislation established a general education transfer core curriculum that applies to all associate degree programs in all of the state's public institutions; however, each four-year campus may require additional courses for certain majors. Transfer students who have completed the core curriculum must still compete for admission to a four-year college and for acceptance into a major, but they are not required to complete work beyond that required of all continuing students or transfer students from four-year institutions (Wellman, 2002).

More partnerships were developed after the NCCCS/UNCS collaborations. The NC High School to Community College Articulation Agreement was developed. The North Carolina Department of Public Instruction and the NCCCS met to create and implement the articulation agreements definitions, goals, objectives and criteria for high school to community college articulation.

According to the North Carolina Community College System (NCCCS) established in 1963, its central mission is to open the door to high-quality, accessible educational opportunities that minimize barriers to post-secondary education, maximize student success, develop a globally and multi-culturally competent workforce. The need for community colleges is growing and enrollment is increasing in today's economic times. The community college system is the backbone of the community as it provides education, training and retraining for the workforce including basic skills and literacy education, occupational and pre-baccalaureate programs. The report *Building American Skills through Community Colleges sponsored by the White House* (2010), states that community colleges, the largest part of the nation's higher education system, enroll more than 6 million students and are growing rapidly. College graduates have a better prospect in labor market and are contributing members of society. Additionally, community

college provides support for economic development through services to and in partnership with business and industry and in collaboration with the University of North Carolina System and private colleges and universities. Community colleges provide services to communities and individuals who improve the quality of life.

Articulation helps to resolve some of the main issues administration have with the transfer process. According to the American Association of State Colleges and Universities (year), there are several hindrance in the transfer process. The first one stems from faculty and administrators attitudes at selective institutions concerned with accepting general education credits from community colleges. A second issue is assuring that students complete the necessary core courses so that they can proceed to their majors. Third, many institutions question the rigor and comparability of courses taken in technical/vocational programs or nationally-accredited, for-profit institutions. A final set of difficulties relates to getting appropriate information to students and encouraging and supporting them through the transfer process. According to a study on Community College Transfer and Articulation Policies, the authors state that administration needs to do a better job of identifying the factors that impede transfer and improve existing policies to address these factors (Gross & Goldhaber, 2009).

Statewide Transfer

Comparable to North Carolina, many states are working diligently on creating seamless pathways for transfer students. According to the National Center for Public Policy and Higher Education (2011), State transfer policies are in place and evolving in several states. For example, Florida, New Jersey, Rhode Island, and Washington offer transfer associate's degrees. Ohio and Texas have standard general education curricula for transfer. Florida and Texas use common numbering of lower-division courses for all public colleges and universities. Arizona is

establishing six transfer pathways leading to associate's degrees that provide a way for students to maximize transfer credits as they move from an Arizona public community college to an Arizona public university.

To increase completion in Massachusetts, state lawmakers are advancing transfer policies, which would establish a more efficient and seamless student transfer system for all public higher education students. Massachusetts Board of Higher Education, called for more streamlined and automated transfer systems among the state's community colleges and universities. Legislation enacted by California will create a transfer degree and guarantee junior status to those transferring between the community college system and the state college system. Students in Florida who transfer from community colleges graduate with the same number of credits as "native" students. In Arizona, there are discipline-specific task forces where faculty from two- and four-year colleges and universities agree on common core courses and discuss curricular changes.

Articulation Benefits

Articulation offers numerous benefits for both student and institution. In an interview with College Board (2011), Patricia McWade, dean of students, financial aid services at Georgetown University stated, "We have a very high graduation rate for transfer students. They graduate with distinction." Stephen Farmer, director of admission at the University of North Carolina–Chapel Hill, stresses that "enrolling transfer students is not charity" (pg. 10). Universities see the value in transfer students as they bring diversity with different races and socio-economic backgrounds and are academically proven when transferring with an associate's degree.

The programs are beneficial in that universities have a distinct group of potential transfer students and the community college has more completers pursuing four year degrees (Fliegler, 2007). The most important advantage of articulation agreement is that it provides students with additional options for degree completion (O'Meara & Carmichael, 2007). A significant benefit to students is the cost savings; tuition at community colleges is lower than four year institution (Andrews, 2000). The cost savings is a key factor for articulation participants. According to the American Association of Community Colleges (AACCS) the 2012-2013 average annual tuition and fees for public community colleges were \$3,130 compared to in-state public four year colleges tuition and fees of \$8,660.

This key component of the articulation agreements is that it allows student to have more transferrable credits upon enrollment into the university. The articulation agreement allows students to transfer usually 60 or more credit hours from the community college and apply those credits towards their baccalaureate degree (Schmitigal, 2009). Universities that create specific program-articulation agreements can allow students to take up to three years or 90 semester credits at the community college (Bers, 2013). The results in students being able to complete their degree in two-three semesters or possible one year after transferring to the university.

The remaining hours must be taken at the university. The accrediting body for the state university, Southern Association Colleges Schools (SACS), states that 25% of courses must be from the degree granting institution. The courses can be taken in online, traditional face-to-face, or a combination of both formats. The requirements of the articulation plan are determined by the university not the community college. Any decisions to modify agreement or terminate can be initiated by either institution.

Dual or concurrent enrollment allows a student to enroll in both the community college and the university simultaneously in an effort to complete coursework quicker and make a smoother transition (Karp & Hughes, 2008). The process provides the student with ability to become acclimated to a new college or university prior to full enrollment. The articulation process involves many areas (enrollment, advisement, financial aid, curriculum, student services) of the university working together within the university and with departments at the community college to ensure the student receives financial aid and credit for their classes (Bontrager et al., 2005).

Articulation Administration

The articulation agreement program is overseen by a collaborative Transfer and Advisement Committee. It is comprised of university representatives from various departments involved in the articulation/transfer process. The committee usually comprises of administrators from the Provost and Deans office, Transfer and Articulation Coordinator, enrollment management (i.e. admissions, registrar, financial aid and student accounts) and department chairs in the degree majors (Detrick, 2008). The transfer and articulation committee would be charged with eliminating barriers for transfer students and assuring a smooth process of articulation participants (Detrick, 2008). The committee helps faculty and staff understand the process and organize presentations, training and workshops to community college upper management on modifications to policies and procedures.

The actual process of developing and reviewing curriculum and coursework to determine course comparability between institutions rests with the faculty at the respective institutions (Tenbergen, 2010). The dean and department chairs oversee the process and higher administration actually signs off on the legal document that binds the two institutions in

agreement. Faculty in each discipline is responsible for the actual review of course content, the identification of comparable courses, and the authorization of acceptance of specific transfer courses.

The Department of Enrollment Management is responsible for developing and maintaining the articulation agreements with individual community colleges and universities. They oversee the facilitation of the articulation agreement process between institutions and coordination of faculty review and development. The Enrollment manager maintains an up-to-date list of approved articulation agreements and ensures articulation agreements are updated prior to expiration. They work with the Chancellor's and Provost office in obtaining signatures upon completion and approval of articulation agreements.

University Liaison's Role

There is dedicated staff knowledgeable in every aspect of the articulation process to assist students. A key aspect of community college coordination is the university liaison. The position may be titled Articulation Officer, University Liaison, or Transfer and Articulation Coordinator, but regardless of the title they are charged with a very important job. According to the California State University Articulation Handbook (2001), the role and responsibilities of an Articulation Officer is a vital, professional-level role requiring an extensive academic knowledge base, highly developed communication skills, and the ability to facilitate and coordinate every aspect of the complex and detailed articulation process. This position requires the ability to quickly analyze, comprehend, and explain the nature of articulation issues to the respective parties, diffuse conflict, and diplomatically negotiate and implement resolutions. The university liaison is essentially the one-stop shop for transfer students. They are the central component in the

articulation process in that they are the bridge between the two institutions, academic programs and students.

The university liaison initiate articulation agreement, serves as a consultant to faculty and academic units, providing needed materials, and information about course articulation and serve as advocate for the faculty and campus academic programs. Additionally, they are the advocates for the other articulating institution and are responsible for accurately communicating and conveying information and concerns about that institution's curriculum to the faculty. The university liaison moderates and mediates problems or disagreements between the faculties of the home campus and the articulating institutions. The university liaison also serves on appropriate campus committees to provide input and to receive information about proposed changes in campus policy and curriculum and disseminate policy changes and update information. The liaison assists with monitoring each stage of the articulation process and follows up with departments and/or faculty for timely responses and decisions. The liaison works with other departments to manages and update campus articulation data and information to appropriate departments, staff, students, and campuses. His or her duties also include attendance at conferences and workshops on articulation issues. The university liaison is a well-informed resource person for campus faculty, administration, counseling, advising staff, and students on curriculum, articulation, and related matters.

This is a definite area for persistence and academic success especially for online degree completion students who may not be local to the university. The liaison's role has a direct bearing on whether students obtain the assistance and information they need to successfully transition to the university and their continue support to assist students once they are enrolled at the university. The liaison is specifically responsible for tracking, advising, enrolling and

processing documents for articulation participants in the program. Additionally, they maintain course outlines and are proactive agent for enhancing and improving existing articulation. Is an advocate for the transfer student and seeks to ease the transfer process.

The liaison visits on a regular basis to provide a constant presence and show his or her commitment on the community college campus. The liaison establishes a relationship with student early to help advise them on the proper transfer courses. They build relationships with counselors, faculty and administrators to work together in the best interest of the student. Community college leaders welcome these advisers on their campus (College Board, 2011).

It is difficult for academic counselors at the community college to know the specific of every four-year institution. The presences of the university liaison allow students to hear the transfer process first hand. This establishes credibility and students will pay attention to advice and recommendations given by the university representative (College Board, 2011). Community college administrators in an effort to collaborate fully in partnership will often provide space and internet to transfer counselors. The counselors may have an established office or set hours and location at the community college campuses (College Board, 2011). The university transfer counselor can provide information on admissions, class registration, financial aid, tuition, curriculum, housing, and student activities right on the spot which minimizes stress for the community college student.

“Institutions which consciously reach out to establish personal bonds among students, faculty, and staff, and which emphasize frequent and rewarding contacts outside the classroom are those which most successfully retain students. Such interaction is the single strongest predictor of student persistence.” (Tinto, 1988)

In a study on students' perception of baccalaureate degree completion programs, Schmitigal (2009), students stated the university liaison was a critical part of their success. Students indicated issues and difficulties of transfer process; however, they stated their relation with the university liaison was positive (Schmitigal, 2009). Students stated they depended on this person to help them with advice on transfer course selection and to be their ally in regards to university administration and academic programs. Students indicated the university liaison assisted with issues involving faculty, convenient course schedules and which faculty to take based on a professor level of difficulty and teaching styles. One student added that the university liaison knew his name and concerns, and was in touch with his needs.

The Articulation Process

According to the State University's website, eligibility for the program requires that the student is admissible to the university and is currently or was previously enrolled at an NC community college. The university will accept a community college student provided they meet minimum academic and course requirements, although specific programs may require a higher GPA for acceptance into the major. Students applying for articulation programs have the benefit of a waiver so no application fee is required (Allen, 2011). Student must indicate they are applying for the dual enrollment program by completing the necessary documentation and have approval by community college and university personnel.

Articulation programs it that opens up the opportunity to allow students in outlying areas to complete their degree online. Students attend their local community college and complete the required curriculum for their associate's degree consisting of general education courses and specific courses for their major degree plan. All of the curriculum courses will transfer to the university even though they may not all be required as a part of the university's degree plan.

Students may also be required to take additional courses needed as a part of the university's curriculum that is not a part of the associates' degree. The courses vary between community colleges because they have some latitude on the courses that comprise their degree program. Credit hours from both institutions are combined to obtain full-time financial aid status (Bontrager et al., 2005). Some institutions publish their agreements on their respective websites.

Students enrolled in the program have many rights and privileges from the university even if they have not completed their community college classes, due to the fact that they have to be admitted to the university before enrolling in the program. Students can receive an identification card from the university, which allows them to be involved in campus activities and utilizing campus resources such as the library. They will not become full members until they are enrolled in at least one class.

The facilitation of articulation agreements can be very labor intensive with paper work, student tracking and advisement. The agreements necessitating regular analysis of equivalent courses, updating and renewal of agreements as there can be constant changes to the university curriculum (Bers, 2013). Articulation has numerous rewards but it is not without its disadvantages. The official procedure and paper work involved is time consuming to staff and troublesome to students. Students have to complete forms ever semester they are dual enrolled. Neglecting to complete the form or submitting the form late could result in a student not receiving credit for classes taken at another institution or non-payment of tuition and fees to the other institution.

According to the state university process and procedures, students are required to register for classes at one or both institutions, obtain advisement from advisors at both institutions, and obtain signatures from administrative departments. The university representative have to verify

the students are in the correct classes, connect with financial aid to ensure the student has enough aid to cover books, tuition and fees at both institutions. Military students and their dependents that are using benefits have an additional step in that their form is also processed through the campus Veterans Administration center. The schedule and courses have to be certified in order for the tuition and fees to be covered through GI bill or other benefits programs.

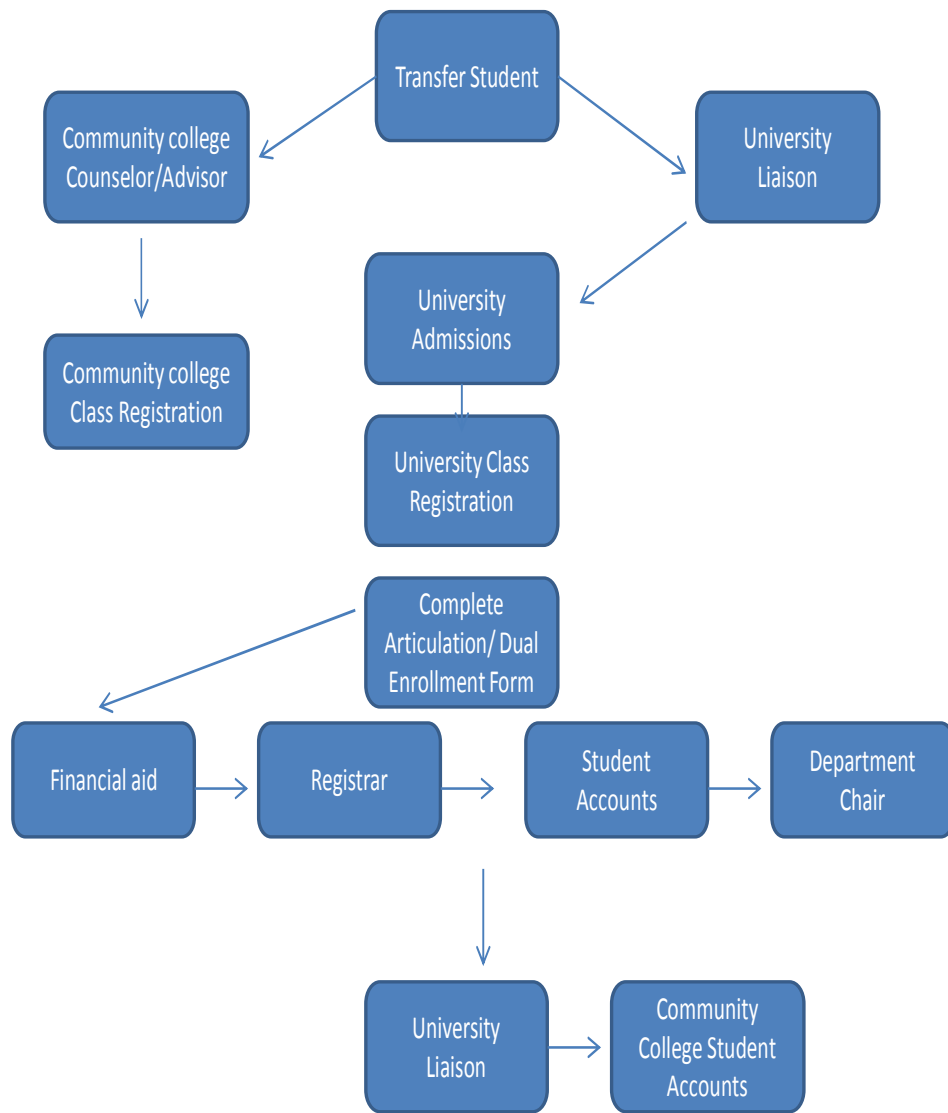


Figure 1. Articulation/Dual Enrollment Process.

Online Learning

The University of North Carolina System, which boast being the oldest public university in the nation with more than 220,000 students in 16 institutions and nearly 70,000 students enrolled in online courses. Over 300 online programs of study available in undergraduate, graduate and certificate online programs through its 16 universities. Through a network of online program and course; location, age and choice of degree program is no barrier to a quality education. According to the UNC Online, their online education programs cater to military personnel & their families, working adults & single parents, 2+2 students & those with some college, but no degree, traditional students, the local community and citizens across the state. The network of online programs in conjunction of online courses and programs at the North Carolina Community College System allows students the flexibility and opportunity to pursue education in different means and formats.

Nontraditional and Military Students

Online learning is growing as an option for nontraditional and military students. According to the National Center for Educational Statistics, participating in online education may allow nontraditional students to overcome some of the difficulties they encounter in coordinating their work and school schedules or in obtaining the classes they want. High school students were once the primary student body on college campuses. Classrooms were filled mainly by eager students straight out of high school. But the vast majority of today's college students work, have a family, are enrolled only part time, or a combination of all three. The National Center for Educational Statistics (2002) reported that at least 73 percent of undergraduates have at least one "non-traditional" characteristic. Research has stated that age, employment status, children and family obligations all have factors of persistence.

According to a 2002 report by the National Center for Education Statistics, approximately 40 percent of college students enrolled at degree-granting institutions are 25 years or older. Many of these non-traditional students have taken college courses in the past but have put their education on hold for a variety of reasons. Moderately and highly motivated nontraditional students are more likely than other students to participate in distance education.

In the US, adult learners fall into the category of nontraditional students, whom the National Center for Education Statistics defines as meeting at least one of the following seven criteria:

1. Delays enrollment (does not enter postsecondary education in the same calendar year that he or she finished high school).
2. Attends part time for at least part of the academic year.
3. Works full time (35 hours or more per week) while enrolled.
4. Is considered financially independent for purposes of determining eligibility for financial aid.
5. Has dependents other than a spouse (usually children, but sometimes others).
6. Is a single parent (either not married or married but separated and has dependents).
7. Does not have a high school diploma (completed high school with a GED or other high school completion certificate or did not finish high school).

Military service members also meet one or more of the criteria listed.

Students are considered to be “minimally nontraditional” if they have one of these characteristics, “moderately nontraditional” if they have two or three, and “highly nontraditional” if they have more than four (Horn & Carroll, 1996). Other categories of non-traditional can include commuter and veterans. Adults age 25 or older comprise more than a

third of undergraduate students. It is predicted that over the next 10 years that adult student enrollment in college is projected to grow faster than for traditional age students (National Center for Education Statistics, 2011). These students may also face issues that are different from traditional transfer students. This new variety of college student is reshaping the face of higher education in America.

Military service members may find it difficult to obtain a degree due to their work and travel schedules and will often obtain credits from several schools before settling at one degree granting institution. Online learning has proven to be a valuable option for military members and their families. Military veterans pursue education to return to the civilian world, change careers, or just from interest in lifelong learning (Zinser & Hanssen, 2006). The issue for military and veterans is limited time and funds. They may choose a two year college first because of its open enrollment, military friendly policy (accept credits for training and experience), and enhanced educational funds for veterans. After successfully completing their associates they look to further their educational and career opportunities by enrolling in a four-year program. The military student is distinctive as evidence suggests that students with military experience are more mature than their civilian counterparts and may have the motivation and determination needed to complete online degree programs (Artino, 2009; Ashe, 2011).

Military personnel are taking advantage of the Post 9/11/GI Bill and other programs available to help them and their families obtain their education. According to the U.S. Department of Education (year), the Post-9/11 GI Bill has also played a large role in helping returning service members attend college. VA has issued approximately \$30 billion in Post 9/11 GI-Bill benefit payments since its inception in August 2009, and helped nearly one million service members, veterans, and their families pursue an education. The Post-9/11 GI Bill is the

most extensive educational assistance program since the Serviceman's Readjustment Act of 1944, more commonly known as the GI Bill, was signed into law. The Veterans Administration reports that veterans are using about half of the allotted thirty-six months of their educational benefits (Ashe, 2011).

Both the community college and university have dedicated staff to assist military and veterans with transitioning from community colleges to the university to restart their educational pursuits. According to U.S. Secretary of Education Arne Duncan, "This is a major step forward in the Administration's work to encourage institutions of higher education to support Veterans with access to the courses and resources they need to ensure that they graduate and get good jobs," (Department of Veterans Affairs, 2013). The mission is to provide veterans success on campus, distance learning, online learning, and other programs that will allow veterans the flexibility to complete their education, whether it is a college degree, certificates, industry-recognized credentials, or licenses to prepare them for jobs. Online learning and articulation agreements serve as a viable option for degree completion for military members.

Online Degree Completion

Online degree completion was developed to meet the demands of the growing number of nontraditional students (Brock, 2014). Community colleges have become leaders in the online learning. Universities have followed suit by offering degree completion for popular programs to provide increased access to higher education. Degree completion programs offer different delivery methods to include online, face-to-face, and hybrid (online and face-to-face).

Online learning is rapidly growing at both two-year and four-year institutions. Administrators are seeking ways to attract more students and are incorporating distance learning opportunities into their curriculum and instruction. Online degree completion programs can be

integrated within the articulation agreements. The student is provided with a degree plan to complete at both the community college and the university (Ignash & Townsend, 2000). This allows students at a distance to complete the core curriculum at their local community college and complete their degree online. Participants of this study can take classes' online using classroom software such as Blackboard or Moodle.

According to the state university, students are declared and registered as traditional or online based upon their choice. Unlike the community college, where students are allowed to take classes online, on campus, hybrid, or both, university students must declare their major as online or traditional. Online degree completion is optimum for dual enrolled students at a distance, as well as non-traditional students who have families, are employed, or just need the flexibility. The benefits of online learning are numerous. Traditional and nontraditional students alike can benefit from the convenience of logging into class anytime anywhere. Students can attend school around work, family, and social schedules. There are also disadvantages for online students that can affect their academic success and persistence to graduation. Online students may not have the opportunity to connect with the university as a whole when at a distance. A social and academic connection is important to student success. Social connectedness as well as a smooth transition, academic advising and academic preparation are areas of concern for retention.

On campus students have many opportunities that are readily available. Socially, they have the opportunity to network, participate in intense class discussions with peers and professors, meet students in the same academic field or have similar social interest. Students can become involved in student activities such as clubs and Greek organizations. Academically, on campus students have the chance to take advantage of resources such as tutoring, career center,

and supplemental instruction. Additionally, on campus students have the option to have one on one sit down session with advisors. Online students have the same opportunities if they choose to travel to the campus, but they often do not because of distance and obligations.

Online versus Face to Face

Research comparing online to face to face instruction have shown very little to no significant differences (Wighting, Liu, & Rovai, 2008). Studies have shown no difference in student performance and satisfaction and both methods have negative and positive outcomes for online learning when comparing a seated class to an online class (Lim et al., 2008). When the course content is deemed equal, traditional, and online student achievement is comparable (Summers, Waigandt, & Whittaker, 2005). Comparing complete degree programs may provide different results as students have to take numerous classes in a degree completion program. The adjustment of taking online classes may be minor or significant based on a transfer students community college experiences. Students who transfer and enroll in traditional face-to-face courses may encounter different issues with academics, student services and self-efficacy than their counterparts who decided to enroll in online degree completion programs. Students that exhibit a high intrinsic motivation tend to obtain higher achievement (Wighting et al., 2008).

Elements influencing academic success and retention with online learning can arise from many variables both internal and external. The main factors that affect online learning are a sense of connectedness and the degree of motivation to learn (Wighting et al., 2008). Comfort level with technology and prior experience with online learning from the community college can be an essential element of academic success (Summers et al., 2005). There is a different level of commitment when enrolling in an online class versus enrolling in an online program. Students who have established they can be successful in online programs are self-motivated, organized,

and have good time management skills. Students who have not maintained the skills of self-regulation may experience difficulty and withdraw from the course or out of the program all together (McMahon & Oliver, 2001). Online courses can be designed to nurture interaction between peers to create a positive learning environment. The creative use of discussion boards, group projects and thread discussions can encourage students to work together and create a classroom type atmosphere (Summers et al., 2005).

Online learning can pose a challenge for even academically proficient students as they may require the social connection of an instructor. They need the attention of an instructor who can readily respond to questions and engage in informative discussion. They are eager to learn and absorb all they can from their classroom experience. Additionally, research has shown that on campus social interactions between students and peers create a positive academic experience, as it relates to overall satisfaction and persistence.

Online learning for at-risk students can be problematic as community college is the most popular method in obtaining a baccalaureate. More students want to complete an academic general education core at the community college and transfer it to a four-year university (Miller et al., 2005). This is especially true for low-income, first-generation and racial and ethnic minorities (Rosenbaum, Person, & Deil-Amen, 2006). Students may have the desire for online classes because of the flexibility, but they need the structure and support of being in a seated class. Students who take their first junior level online class at the university risk not being academically prepared for the vigor of the course compared to resident students. There has been question to whether community colleges courses sufficiently prepared students for higher level courses when transferring to a four-year university (Friedl et al., 2012).

Online learning may be convenient for students, but it is not endorsed for everyone. Online learning is not recommended for students who are experiencing academic, social or personal issues as online learning requires time management, self-motivation, strong independent study skills, and the ability to work with little supervision. Nonetheless, all students can take advantage of online learning and participation in articulation agreements. Students are not prohibited based on their academic ability.

Two-year and four-year institutions serve students with different levels of academic preparation. Community colleges tend to serve less prepared students as a result they tend to enroll in remedial classes upon entrance to college and fall into the at-risk category (Cohen & Brawer, 2003). University faculty does not focus its instruction toward developmental education needs and they expect students to be academically prepared (Cohen & Brawer, 2003). At risk can be defined as students who are low income, minority, first generation, underprepared and/or working students. Statistically at risk students are more prone to drop out, sit out or withdraw completely. If community college transfers are not prepared academically, this might result in the need for developmental courses and additional academic and financial support and longer time to degree attainment (Melguizo, Kienzl, & Alfonso, 2011).

Barriers to Degree Completion

Transfer Process

According to Hatton, Homer, and Park (2009), barriers to persistence comprise of tuition cost, academic policies, campus climate, and post-transfer adjustment. The transfer process itself is the most significant barrier (Allen, 2011). The transfer procedure involves accurate assistance from the community college and university staff in the areas of academic preparation, advisement, transfer evaluation, financial aid, and psychosocial factors (Garda, Patona, &

Gosselina, 2012). Adjustment can be a challenge for students who transfer from a community college to a four-year institution (Berger & Malaney, 2003), keeping in mind that the transfer student may have to go through enrollment process multiple times with each experience being different (Hatton et al., 2009). Obstacles can be avoided in knowing and understanding what will, and will not occur. Persistence can be affected when students are faced with the need to repeat courses or discover they have selected courses not required by the four year institution. These students often drop out of the program because of frustration (Beiber, 2011). There are many reasons students transfer to a four year university with the most substantial being time and cost savings. In addition, the reputation of the school, advisor/recruiter, campus activities and recommendation by community college, staff, or alumni weigh in as to where and when to transfer.

It is important to consider how well students adjust to and fit in with the academic and social environments of a campus. Academic and social factors provide an all-inclusive understanding of the college adjustment process (Berger & Malaney, 2003). Articulation programs allow students to experience the collegiate atmosphere in stages. This method of integration into the curriculum and social environment can avoid student transfer shock. According to a report at the National Academic Advising Association (NACADA) website, transfer shock refers to the decrease in grade point average once the student is enrolled in the higher institution. This effect could also result from the inability to integrate into the academic and social environment (Laanan, 2003).

Traditional orientation and student success programs are geared towards traditional freshman population. These programs are proactively involve in a students' academic success by offering tutoring, math and reading labs, learning communities and activities to foster growth

and retention. Transfer students are often not involved in campus resources because both the faculty/staff and the student believe that academic self-efficacy has taken place and they are beyond the need of support services.

Academic Success and Persistence

Issues in retention and persistence can be related to quality of teaching, social interactions, campus environment and motivation. There are many factors that influence student learning and persistence in the classroom. Motivation is an influence in the decision to transfer, however interactions, academics and socialization have a major influence on transfer and retention (Tinto, 1998). It is important to determine the driving force behind the decision to transfer. The Survey of Entering Student Engagement, or Sense (2012), results revealed 90 percent of community-college students said they agreed or strongly agreed that they had the motivation to do what it took to succeed in college. More than three-quarters of respondents (88%) agree or strongly agree that the instructors at their colleges want them to succeed.

Adult are inherently motivated to learn and motivation issues are a result of character or circumstances (Ahl, 2006). Extrinsic and intrinsic motivation has been researched and discussed extensively as it pertains to adult learners. The internal desires to perform a particular task or activity because it provides satisfaction or expands their knowledge can be a motivator. Factors external to the adult learner and unrelated to the assignment they are performing may use money, grades, or other reinforcement motivation (Lei, 2010). The influences of these motivators have diverse effects on the college student. They equally provide the means for achievement and success.

College degrees are not just a path to financial security; they allow you to belong to a different culture of wealth and knowledge (Olive, 2008). College student stress can affect their

determination to succeed. The demands of sustaining a balance between academics, personal, and professional relationships is difficult for college students to face. Some of the challenges to address are academic load, being away from home, family obligations, work, maintaining personal relationships, time management, financial obligations, and becoming acclimated to a new environment (Lindsey et al., 2011).

Best practices include students-faculty contact and student peer interactions, as well as quality of teaching cultural and interpersonal involvement (Pascarella et al., 2005). The relationships students establish as well as racial/ethnic differences in faculty-student interactions are essential to understanding minority students' academic success and persistence (Astin, 1993; Pascarella & Terenzini, 1991). Faculty is responsible for ensuring students have clear instructions in their syllabus on grading and attendance policies, assignments and due dates. Faculty and staff is responsible to ensure that all students get connected to resources, information, services, and people that can contribute significantly to their success at their institution.

Student withdrawals are attributed to student's dissatisfaction with course content and delivery; overall student experience with social factors; faculty and staff incompatibility; inability to cope with the demands of higher education and improper choice of degree program (Assiter & Gibbs, 2007). The family and other support systems play a significant role. Support and encouragement can be a strong influence in persistence as well as determination. Unfortunately not all issues can be combated with determination; however a strong motivational influence can keep some students striving for success. Dedication is as much of a key factor as motivation. Students operating on self-efficacy may interpret stressful situations as challenge. This differs in the viewpoint of a student who lacks self-efficacy and interprets stressful

situations as insurmountable. The student with the determination to succeed will be more motivated to persevere regardless of the perception of challenges or hurdles (Thomas, Love, & Roan-Bell, 2009).

Academically Unprepared

Community colleges are valuable in that they serve a diverse student population and as an alternative to four-year institutions for academically unprepared for college-level work (Roksa & Calcagno, 2010). Many students enter undergraduate degree programs are underprepared for college-level work. Placement test indicate that they mainly lack in subjects such as math and writing. It is not unusual for over half of the students entering a community college to require some type of developmental course work (Cohen & Brawer, 2003). Remedial courses are offered to assist students develop the academic skills necessary to succeed in higher education. Some community colleges exceed 70% of students requiring at least one developmental course (Bieber, 2011). They provide a solid education for students who are academically talented but for reasons of cost, family issues or confidence have chosen to start their education at a community college. At the other end of the spectrum, the community college serves students who may struggle academically or have socio-economic or socio-demographic concerns.

Test scores are significant lower for students pursuing education at a community college than at a university (Allen, 2011). At-risk students experience a high attrition rate before degree completion. Students not qualifying for entrance into four-year institutions is due to not meeting minimum academic requirements (grade point average and test scores) or minimum course requirements as a part of the college prep track (enrolled in career or occupational prep track) in high school. The strongest predictor of academic performance in college are high school grade point average and standardized test scores (SAT/ACT). Unfortunately, students who are not

academically prepared for college tend to sit out for a period of time before deciding to continue their education. This can be a disadvantage to students who return later to continue their education as research indicates that students who attend college immediately after high school tend to complete college at a higher rate (Porshea et al., 2010).

Academically unprepared students continued to lag substantially behind their more prepared counterparts (Roksa & Calcagno, 201). When unprepared students enter a four year institution they often encounter a failing grade within their first or second semester because they cannot keep up with pace or demands of a university course (Roksa & Calcagno, 2010). According to Adelman (2005), student preparedness for the rigorous curriculum taught by doctoral level professors can be challenging for transfer students. It is important for community college students to be prepared for university level work. Transfer students might have difficulties adjusting to the academic demands of their institutions. Students who enroll in community college are far less likely to have taken college prep courses and more likely than traditional four-year students to be enrolled in remedial classes (Adelman, 2005).

Comparative to four-year institutions, community colleges disproportionately serve less academically prepared students. Statistics show that community colleges loose half of their students prior to the students 'second year of college (Beiber, 2011). The issue for this study is how college students are progressing academically while enrolled in degree completion.

Transition

It is beneficial for four-year institutions to admit transfer students who are adequately prepared for junior-level work and who will graduate on time. Both two-year and four-year institutions have a vested interest in transfer students' persistence to complete a baccalaureate degree. Students who are academically prepared to transfer from a two-year institution often face

other adjustments once they enter a four-year college. Satisfactory educational attainment and grade point average at a community college may not be enough to promote the success of transfer students at a four-year institution (Laanan, 2003).

Students and parents seeking educational value and a return on their investment are faced with competitive admission and high tuition costs. This, compiled with a weak economy, has led students to consider options other than their first choice institutions. According to a College Board report (2011), students today are more likely than at any other point in history to choose to attend a community college. Retention and persistence to graduation is the focus for higher education administrators, however, it is difficult for institutions to solve problems of students being unprepared emotionally, academically, and faced with personal issues such as financial, family responsibilities (Assister & Gibbs, 2007). A student's persistence is affected by academic variables and psychological factors. Students can have unrealistic educational goals that can hinder them from achieving their goal of graduation (Filak & Sheldon, 2008). The level of achievement and ability needed to be successful in higher education can be overwhelming once they are attending college. It may be a struggle but ultimately students control their own grades through effort, skill, and intellect (Filak & Sheldon, 2008).

The perception by four-year college faculty of a lack of rigor by community college programs and an automatic discount of the value of community college transfer credits (Bieber, 2011). Universities local to students lacked appeal when they discovered many of their classes would not transfer and had to repeat classes with the same title and content area. The researcher discovered through a discussion with one of the deans that the same course was taught at both the university and community college using the same book and same instructor. The courses, in his opinion were equivalent and credit should be given for similar courses. Community college

transfers are willing to enroll in a university in an online program rather than risk losing credit hours which is a loss in energy, time, and money.

Academic Advising

Academic advising is a lifeline to successful degree completion especially for articulation participants. It is the link that brings the two worlds together cohesively. Metzner (1989) indicated academic advising is essential to retention. Advising links students' goals with institutional resources, services, and programs. Effective advising will lead to higher levels of motivation to persist and increased academic satisfaction. According to the Community College Survey of Student Engagement (2014), students are more likely to persist if they not only are advised about courses to enroll, but also are aided to set academic goals and create a plan for achievement.

Admissions and academic counseling departments are usually the first contact with a student. Student form their impression of the university quickly based on their customer service experience. There is evidence of a direct correlation between academic advising, student satisfaction, persistence, and graduation (Gardner & Kerr, 1995). The significance of academic advising is often underestimated. Advising is not just important upon entry, it must remain constant through the educational process and beyond. Students will continue to need advisement throughout their journey. Advisors are there to help students set goals and establish realistic timelines. Effective advisors inform students of the demands of the coursework and study time. Students are provided with a realistic view of college life as they inform students of how work and family can effect course load and suggest credit hours based on their overall responsibilities.

An important part of academic advising is assisting student with declaring a major and career exploration. Declaring a major is important. Students need to become involved with their

department early on to see if they are in an area that they will enjoy and persevere. The faculty in the classroom and the advisors play a key role in retention. They provide validation and knowledge and experience outside of the textbook and curriculum. This helps student to persist as they relate their major to real life and relevant situations. Students can be encourage to join a club associated with the major and take on a leadership role. According to a Noel-Levitz Priority Report (2013), student list the following items, in order, as important to their college success: concern for individuals, institution effectiveness, academic advising campus climate, and student centeredness.

There are different types of counseling available to students; career, student success, academic and mental health to help students persist. Transfer students, nontraditional students, and articulation participants need to know these services exist and are available to them. It is not uncommon for students to experience isolation and lack of communication issues as they are unable to connect to the campus culture. They may seek out advisors to provide assistance with adjusting and coping. Advisors can make referrals to the professional counseling department for students to meet with professional mental health staff.

Academic advisors work closely with retention and student success programs advising students on academic probation and suspension. They offer them options to stay in school, take responsibility for their education and provide an academic success plan to follow. Advisors can refer student to tutors, supplemental instructors, and other academic support resources to help them persist. Advisors can be very effective in providing social connectedness to the university. Advisors can provide guidance to students on extracurricular and campus organizations and provide networking opportunities to students in the areas of interest. Students needing specific career and declaration of major information can receive a referral from the advisement

department to the career center for intensive individual counseling to include occupational testing, resume writing, interviewing, internships, as well as workshops on dressing for success, social media, and proper etiquette.

Most importantly, students are looking to obtain helpful relevant information to include advisement on transfer credits prior to enrolling in an institution. Advisement between community college and university is critical. Students need to know how to navigate registration, academic procedures, transfer policies, academic regulations such as drop/add, withdrawals, academic suspensions etc. Transfer students know they have options and can shop to determine which college/university will provide them with the most transfer credit. If students are confused by requirements or if they take courses they do not need, they may become concerned about wasting money and time and become frustrated by an institution's lack of help (Hatton et al., 2009). When academic advising falls short, it has a direct effect on enrollment and retention. Students can be easily discouraged and may elect not to attend.

Student Satisfaction

On their journey, they will also encounter admissions, financial aid, academic advising, before meeting faculty (Hatton et al., 2009). Everyone from the public safety officers, cafeteria workers, to the bookstore clerks has a bearing on student satisfaction and persistence. Students can become frustrated easily and students who lack determination and direction can easily fall off track with faced with adversity. Negative encounters with academic and/or support staff, policies or procedures and environment can lead students to withdraw, while positive encounters cause students to invest in the college experience (Pascarella & Terenzini, 2005). A positive student friendly atmosphere keeps students encouraged.

There are many factors beyond directly and indirectly affect persistence and satisfaction. A student's motivation and commitment has significant value. Studies have also shown that age, work hours, and financial aid influenced student persistence to graduation with GPA being the strongest predicting variable for persistence (Nakajima, Dembo, & Mossler, 2012). Poor study habits, absenteeism, and uncertainty about their major or career goals can affect their ability to perseverer. Studies on transfers students have focused on academic achievement as means of determining student satisfaction and persistence (Berger & Malaney, 2003), however there is more involved with achieving a satisfactory experience. The smoothness of the process will determine student retention, satisfaction and matriculation to graduation (Anderson et al., 2006). Some universities establish specially designed transfer centers, provide transfer orientations and dedicated transfer coordinators to facilitate an efficient and effective matriculation of each student (Slotnick, 2010). The main factors that influence student persistence are family support, positive relationships with professors, and good course experiences (Kelly et al., 2012). Studies have shown the family support has had an overwhelming influence on student retention. Encouragement and support from individuals outside the institution, family members, close friends, and employers, has been positively associated with persistence.

Social Connectedness

The need for social interaction can influence overall satisfaction with instruction and the university. Studies have shown that transfer students were the least to engage in college activities (Berger & Malaney, 2003). Commuters tend to go to class and leave immediately after without mingling with their peers. For students who were socially involved at the community college, there is no guarantee that they will continue to be involved in community and social activities at the university. They may shy from interaction because they may feel they need to

establish themselves all over again. A student's age and family obligations have some bearing on their social connections. There is a difference between traditional and nontraditional students as it relates to social adjustments. Traditional students interacted primarily with peers and in related activities; older students were less involved in campus activities and more likely to be involved in caring for family (Bye, Pushkar, & Conway, 2007).

The social ambiance of the college campus is interconnected with the student. Feeling socially connected is an important part of college life. College organizations can provide a supportive climate. An organization can offer a group of similar interest, sense of belonging and allows students to focus more on learning (Thomas et al., 2009). Students can obtain a positive experiences, support and motivation to achieve from faculty and staff through engaging in goal-setting activities. Active participation in orientation and academic success workshops can render positive results. Peer and faculty mentors can provide students with a sense of belonging and connectedness, which can inspire confidence to be academically successful (Thomas et al., 2009).

There are many factors (advising, academic preparation, learning styles, social connectedness, motivation, satisfaction) that can effect persistent and academic success. Those factors were briefly discussed as possible areas of interest for educators and administrators. Once a student transfers, there must be resources in place to help him or her succeed. Most importantly, the students need to know what resources are available and their location. Assisting students to matriculate to graduation is no easy task. Each individual student comes with his or her own abilities and concerns. This quantitative study will not reveal individual reasons why some students did not persist; however, the research will point out the percentages of students who persisted to graduation as well as the percentage of students not retained due to academic

difficulty. The study will also reveal the number of college's transfer students attended prior to finding the institution to graduate. Transfer students trying to find the right fit for them academically, socially, and economically will attend more than one institution. Students swirling back and forth can be a concern, as it affects retention for every college they attend. The overall research will reveal how well articulation students progressed academically once transferring to a four year institution.

CHAPTER THREE: METHODOLOGY

Introduction

Articulations agreements are formal documents that outline the curriculum and process by which community college students can transfer to a university. Bilateral agreements are program-to-program curriculum for specific degree programs, usually associates of applied science degrees. Both agreements designate equivalent courses that will transfer to the other institution (Reese, 2002). Collaborations between community colleges and four year institutions are growing as both are vested in degree completion. Transfer students are most successful when provide with assistance from four-year colleges prior to attendance (Maureen, 2008). Articulation agreements provide a seamless transition for community college students to obtain a bachelor's degree. Students benefit from a dedicated degree plan, academic advisement from both institutions, financial assistance and a clear pathway to achievement. Students benefitting from this program have the opportunity to complete their degree face to face or online degree completion.

The purpose of this study is to examine the effectiveness of articulation programs by determining success and persistence in time to degree obtainment, grade point average and completion rates of online and traditional (face to face) articulation participants. The significance is to determine the impact of learning method on student success and program effectiveness. The effectiveness of the program can directly affect the transfer process, retention, graduation, and funding for recruitment.

The purpose of this study is to determine if online and traditional learning for articulation participants are equally effective in achieving degree completion. This study will research articulation participants who transfer from a NC Community College to the state university that

are enrolled in traditional face to face classes and those students who enrolled in online degree completion.

Design

A causal-comparative research design will be used to test the hypotheses on persistence. An ex post facto design was appropriate, since it investigates possible cause-and-effect relationships by observing an existing condition. At least two different groups are compared on a dependent variable or measure of performance (effect) because the independent variable (cause) has already occurred or cannot be manipulated. This study examines two homogenous groups, the independent variable (online and face to face degree completion program) to determine the significance of dependent variables: time to degree obtainment, grade point average and degree completion. Causal-comparative determines causes or significances of pre-existing differences among groups of individuals, as opposed to experimental researchers who create a difference between groups and then compare their performance on one or more dependent variables to see what effects the created difference has made (Gall, Gall, & Borg, 2007). Individuals are not randomly selected, but are selected because they belong to groups. A random sample can be selected from two already-existing populations.

In most instances, one group possesses a characteristic that the other does not and represents a different population. Each group will have similar characteristic in differing quantities. In causal-comparative research the random sample is selected from two already existing populations, not from a single population as in experimental research. Threat to validity is the possibility that the groups are different on some other important variable (e.g. gender, experience, or age) besides the identified independent variable. Lack of randomization, manipulation, and control are sources of weakness.

Research Question

The following exploratory questions guide the analysis of information to describe and explain articulation participant persistence and retention based on their degree completion method.

1. Can articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method?
2. Is there difference in grade point average based on online or face-to-face degree completion method?
3. Is there difference in graduation rates based on online or face-to-face degree completion method?

Null Hypothesis

A null hypothesis will be used for this research.

Null hypothesis 1: There is no significant difference in time to degree obtainment for online and face to face articulation participants.

Null hypothesis 2: -There is no significant difference in grade point average for online and face to face articulation participants.

Null hypothesis 3: There is no significant difference in baccalaureate graduation rates for online and face to face articulation participants.

Participants

The study participants will be students who transferred from at least one of the 14 North Carolina Community Colleges in partnership with the university through an articulation agreement. A randomized sample size of approximately 200 students will be utilized. The

participants will be grouped according to whether they declared their major as a traditional face-to-face student or as an online degree completion.

Setting

The study will take place at a State University in North Carolina. This university has a student enrollment of approximately 6,200. This site offers dual enrollment in five majors: criminal justice, business administration, education, fire science, and RN-BSN nursing. Education students will not be included in this study due to the fact that the education curriculum is not offered in an online degree completion format.

Instrumentation

Data collection will be obtained through accessing the universities Banner (self-service) and Internet Native Banner (administrative) data base management system and Hobson EMT, a web-based retention manager and contact database. This system is appropriate for this study because it contains original copies of student's community college transcripts, admissions application data, state university transcripts, degree completion dates and descriptive statistics. Banner numbers (student identification number) will be used to locate student's data. Names and banner numbers will be kept confidential and secured and destroyed after initial data is obtained.

Procedures

After completion of proper forms and proposal defense, the proposal was submitted to Liberty University Institutional Research Board for approval to conduct research. Once approved the proposal was submitted to the State University's Office of Sponsored Research for approval. This study utilize archived historical data from the State University and not the NCCCS because the students have already transferred and enrolled at the university. Data for

this study will include students enrolled in the dual enrollment articulation program from January, 2008 through May, 2014. The articulation program was developed in 2006 and there needs to be sufficient time, approximately two or three years, for the programs to be established, advertised, recruit, enroll, and allow students to matriculate through the program. Data will be compiled from student records will include academic information: community college attended, transfer and state university credit hours completed, grade point average, major, graduation dates and total community colleges attended. Data will include instruction delivery method; online or face-to-face. Descriptive statistics will include race, gender, and age. Frequencies and percentages will be used to determine if there was a significant difference in the time to degree attainment, grade point average and completion/graduation rates between the student groups.

Data Analysis

Data will be analyzed using SPSS 22. The inferential statistical testing techniques used will be a *t* test and analysis of variance (ANOVA). This study examines two groups, the independent variable (online and face to face degree completion program) to determine the significance of dependent variables. The dependent variables include persistence, graduation completion rates (graduates, drop outs, academic probation/suspension), overall grade point average, and time-to-degree attainment. The researcher will used descriptive statistics for the initial analysis of data. Statistical significance in the descriptive statistics will be determined by using a *t* test. A *t* test will determine the significance of the difference between two means. The study will use a small sample and a *t* test is more appropriate for small samples (Gall et al., 2007). Analysis of variance compares the amount between-groups variance in individual's scores with the amount of within groups' variance (Gall et al., 2007). This statistical analysis is

appropriate when the study involves more than two groups (online, face to face, traditional, and nontraditional).

This study examines two groups, the independent variable (online and face to face degree completion program) to determine the significance of dependent variables. The dependent variables include persistence, graduation completion rates (graduates, drop outs, academic probation/suspension), overall grade point average, and time-to-degree attainment. The researcher will use descriptive statistics for the initial analysis of data. To determine if articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method, a *t* test will be used. To determine if articulation participants are able to maintain their GPA online or face-to-face degree completion method once they have matriculated to the university. A Chi-square test is used to explore the relationship between two categorical variables. Chi-square analysis compares the observed frequencies or proportion of cases that occur in each of the categories. To determine if there is any significant difference in graduation rates based on online or face-to-face degree completion method. A one-way ANOVA was used to determine if participation in an online program or face-to-face program had any influence on time to degree attainment. A two sample *z*-test was performed to determine whether there was a significant difference between the two comparison groups on the dependent variables.

CHAPTER FOUR: FINDINGS

The purpose of this causal-comparative study was to examine whether differences exist in the retention, persistence, and academic achievement of articulation participants based on the instructional delivery method. The study examined time to degree obtainment, grade point average, and graduation rates of bilateral articulation students who transferred from a North Carolina Community College (NCCCS) to a state university and enrolled in either traditional face-to-face classes or online degree completion. The following exploratory questions guide the analysis on articulation participant persistence and retention based on their degree completion method: Can articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method? Is there a difference in grade point average based on online or face-to-face degree completion method? Is there a difference in graduation rates based on online or face-to-face degree completion method?

Descriptive Statistics

All Students

Participants for the study were students who transferred from one of 14 North Carolina Community Colleges in partnership with a state university and formally enrolled in a dual enrollment articulation program. The study's participants were from the state university's College of Arts and Science and School of Business and Economics. The School of Education, which has the largest enrollment of articulation students, could not be used for the study because they did not offer an online degree completion option. There are 287 participants included in the study. Participant demographics are summarized by program format (see Table 1).

Table 1: Summary of Participants

	Total <i>n=287</i>	Online <i>n=183</i>	Face-to-Face <i>n=80</i>	Did Not Enroll <i>n=24</i>
<i>Variables</i>				
Age				
Mean	36.80	36.95	35.73	39.29
SD	12.56	13.36	9.22	15.71
Ethnicity				
Non-Hispanic	0.97	0.98	0.96	0.96
Hispanic	0.03	0.02	0.04	0.04
Final GPA				
Mean	2.77	2.70	2.91	-
SD	1.08	1.17	0.85	-
Format				
Online	0.64 (183)	-	-	-
Face-to-Face	0.28 (80)	-	-	-
Unknown	0.08 (24)	-	-	-
University Hours				
Mean	41.35	36.85	51.63	-
SD	26.69	24.26	29.21	-
Gender				
Female	0.79 (227)	0.77 (141)	0.85 (68)	0.75 (18)
Male	0.21 (60)	0.23 (42)	0.15 (12)	0.25 (6)
Major				
Criminal Justice	0.67 (191)	0.67 (122)	0.65 (52)	0.71 (17)
Business	0.14 (39)	0.09 (16)	0.23 (18)	0.21 (5)
Nursing	0.14 (39)	0.20 (37)	0.03 (2)	0.00 (0)
Fire Science	0.03 (8)	0.02 (4)	0.05 (4)	0.00 (0)
Psychology	0.01 (3)	0.01 (1)	0.03 (2)	0.00 (0)
Sociology	0.003 (1)	0.00 (0)	0.01 (1)	0.00 (0)
Unknown/Missing	0.02 (6)	0.02 (3)	0.01 (1)	0.08 (2)
Race				
African American	0.51 (146)	0.46 (85)	0.61 (49)	0.50 (12)
Caucasian	0.36 (102)	0.40 (74)	0.26 (21)	0.29 (7)
American Indian/Native Alaskan	0.04 (12)	0.04 (8)	0.04 (3)	0.04 (1)
Hispanic	0.03 (8)	0.02 (4)	0.04 (3)	0.04 (1)
Unknown	0.06 (17)	0.06 (10)	0.05 (4)	0.01 (3)
Other	0.01 (2)	0.01 (2)	0.00 (0)	0.00 (0)
Status				

Graduated	0.57 (164)	0.63 (115)	0.61 (49)	-
Currently Enrolled	0.10 (29)	0.10 (18)	0.14 (11)	-
Did Not Enroll	0.08 (24)	-	-	1.00 (24)
Stopped Attending, Good Standing	0.10 (28)	0.10 (18)	0.13 (10)	-
Stopped Attending, Suspension/Probation	0.12 (35)	0.14 (26)	0.11 (9)	-
University Withdrawal	0.02 (7)	0.03 (6)	0.01 (1)	-
Time to Degree				
Mean	4.88	4.59	5.59	-
SD	2.54	2.35	2.84	-
Total Colleges				
Mean	1.84	1.93	1.68	1.65
SD	0.97	0.99	0.88	1.03
	Total	Online	Face-to-Face	Did Not Enroll
	<i>n=287</i>	<i>n=183</i>	<i>n=80</i>	<i>n=24</i>
Total Hours				
Mean	140.01	140.22	139.70	-
SD	38.63	36.90	42.56	-
Transfer Hours				
Mean	96.93	103.29	88.31	77.13
SD	31.33	30.69	30.72	22.84
Note: Means and standard deviations reported for metric scales; proportions and (counts) reported for all other scales.				

There were 287 students who applied to the dual-enrollment, bi-lateral articulation agreement program. Of the 287 students, 183 (63.8%) enrolled in the online program, 80 (27.9%) enrolled in the face-to-face program, and 24 (8.4%) did not enroll after being accepted to the university. The majority of students were female (79%).

Racially and ethnically, 146 (51%) of the students were African American, 102 (36%) were white, 12 (4%) were American Indian or Native Alaskan, 8 (3%) were Hispanic, 2 (1%) classified themselves as “other,” and 17 (6%) were unknown (did not disclose race or ethnicity). The mean age of all students was 36.80 years.

At the time of data collection, the average student had been accepted to the state university with 96.93 credit hours, had completed 41.35 credit hours at the state university, and had earned a GPA of 2.77 and 140.01 credit hours.

Online Students

There were 183 students enrolled in the online program. The majority of students were female (77%). Racially and ethnically, 85 (46%) of the students were African American, 74 (40%) were white, 8 (4%) were American Indian or Native Alaskan, 4 (2%) were Hispanic, 2 (1%) classified themselves as “other,” and 10 (6%) were unknown (did not disclose race or ethnicity). The mean age of online students was 36.95 years.

At the time of data collection, the average online student had been accepted to the state university with 103.29 credit hours, had completed 36.85 credit hours at the state university, and had earned a GPA of 2.70 and 140.22 credit hours.

Face-to-Face Students

There were 80 students enrolled in the face-to-face program. The majority of students were female (85%). Racially and ethnically, 49 (61%) of the students were African American, 21 (26%) were white, 3 (4%) were American Indian or Native Alaskan, 3 (4%) were Hispanic, and 4 (5%) were unknown (did not disclose race or ethnicity). The mean age of face-to-face students was 35.73 years.

At the time of data collection, the average face-to-face student had been accepted to the state university with 88.31 credit hours, had completed 51.63 credit hours at the state university, and had earned a GPA of 2.91 and 139.70 credit hours.

Results

Research Question 1

Research Question 1: Can articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method?

Null Hypothesis 1: There is no significant difference in time to degree obtainment for online and face to face articulation participants.

Because the dependent variable is a continuous variable, a t-test of independent samples was used to compare the mean number of semesters students took to complete a baccalaureate after enrolling at the state university for online students and face-to-face students. There was a significant difference in the scores for online students ($M=5.27$, $SD=2.251$) and face-to-face students ($M=6.38$, $SD=2.936$); $t(71.32) = -2.330$, $p=0.023$ (see Table 2). These results indicate that there is a significant difference in the mean number of semesters to earning a baccalaureate degree based on students' program format. Specifically, online students complete baccalaureate degrees in fewer semesters than do face-to-face students.

Table 2: t-test, Time to Degree Completion by Degree Completion Format.

Group	n	M	SD	T	p=
Online	114	5.27	2.251	-2.33	0.023
Face-to-Face	48	6.38	2.936		

Research Question 2

Research Question 2: Is there a difference in grade point average based on online or face-to-face degree completion method?

Null Hypothesis 2: There is no significant difference in grade point average for online and face to face articulation participants.

Because the dependent variable is a continuous variable, a t-test of independent samples was used to compare the mean final GPA for online students and face-to-face students. There is no significant difference in the scores for online students (M=3.23, SD=0.561) and face-to-face students (M=3.18, SD=0.496); $t(101.9)= 0.514$, $p=0.608$ (see Table 3). These results indicate that there is not a significant difference in the mean final GPA based on students' program format; online students and face-to-face students to do not differ in their final GPAs.

Table 3: t-test, Final GPA by Degree Completion Format.

Group	n	M	SD	t	p=
Online	115	3.23	.561	0.514	0.608
Face-to-Face	49	3.18	.496		

Research Question 3

Research Question 3: Is there a difference in graduation rates based on online or face-to-face degree completion method?

Null Hypothesis 3: There is no significant difference in baccalaureate graduation rates for online and face to face articulation participants.

A chi-square test of independence was conducted to determine if program format is related to the percentage of students who graduate. The results of the chi-square test were not significant, indicating that program format and degree completion are independent of each other, $\chi^2(1, N=163)=0.060$, $p=0.806$ (see Table 4). Therefore, the percentage of students who completed a baccalaureate degree did not significantly differ based on program format (see Table 5).

Table 4: Chi-square Test of Independence, for Program Format.

Variable	χ^2	df	p=
Completed baccalaureate degree	0.060	1	0.806

Table 5: Chi-square Test of Independence Cross-Tabulation, for Program Format.

	<u>Program Format</u>		
	Online	Face-to-Face	Total
Did Not Graduate	68 (37.2%)	31 (38.8%)	99 (37.6%)
Graduated	115 (62.8%)	49 (61.3%)	164 (62.4%)
Total	183 (100%)	80 (100%)	263 (100)

Note: Reported as counts (column %).

Summary

This study's findings rejects the hypothesis that program format influences the length of time students take to complete a baccalaureate degree. However, the results do support the hypothesis that program format influences students' final grade point averages or the percentage of students who earn baccalaureate degrees.

CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

In Chapter Five, the researcher provides a summary as well as an overview of the results of this quantitative study. The chapter will include a review of the findings, the significance of the study in reference to current literature, and recommendations for future research.

The following sections are discussed in this chapter: purpose of the study, problem statement, summary of results, limitations of the study, implications of the study, and recommendations for future research.

Discussion

Purpose

The purpose of this causal-comparative study was to examine whether differences exist in the retention and persistence of articulation participants based on the instructional delivery method. The study determined time to degree obtainment, grade point average, and graduation rates of bi-lateral articulation students who transfer from a North Carolina Community College (NCCCS) to a state university and enroll in traditional face-to-face classes versus articulation participants who enroll in online degree completion.

Problem Statement

The success of the students who enroll in articulation programs is of great importance to the university and community college. Universities have recognized that it is beneficial to engage in collaborative relations with community colleges in order to funnel transfer students into their degree programs (Amey, 2007). The partnership can benefit the student and both institutions as the collaboration may produce more completers and grow enrollment. A great deal of resources and manpower is utilized to keep articulation programs operational at both the community college and four year institution (Bers, 2013). Performance, enrollment and

graduation data is essential in determining program effectiveness. Specifically, to determine if one format (online or face-to-face) proves more effective in producing graduates than the other. Institutions of higher learning that offer articulation programs are interested in the success of the program as well as student academic success and persistence (Bontrager et al., 2005).

The problem of this study is to determine whether students are successfully completing articulation programs and matriculating to graduation. Previous studies on articulation, recommended the need for documented data on the success of the program. Researchers suggested deeper analysis on grade point average, degree completion rates, and average amount of transfer credits. Other researchers wanted to know to what extent are articulation agreements effective. This study explored online and face-to-face degree completion methods to determine if there is any significant difference in student outcomes and the overall effectiveness of the program. The study also reviewed the articulation process and procedures as it relates to student persistence and retention.

Summary of the Results

The partnership between community colleges, 4 year colleges, and universities have proven to be effective in providing seamless transfers, eliminating questions, and concerns on transfer credits and enrollment. Transfer programs, orientation and collaborative agreements work cooperation to facilitate a positive experience. An articulation study by Wharton (2009), showed that students who participated in the transfer transition program were 3.29 times more likely to have all of their community college credits transfer to the four-year institution, which subsequently can affect persistence. The results of this study indicated a positive graduation rate. The study also showed that both methods of degree completion, online and face-to-face, are effective means of degree completion. The online program appears to provide quicker time

to graduation; however, the amount of classes taken at the community college prior to enrolling must be taken into account.

The study examined if time to degree attainment, grade point average and graduation rates showed any difference based on whether the articulation participant chose to complete their degree online or face-to-face. There were 287 students who enrolled in a dual enrollment bilateral articulation agreement. There were 230 (79%) female participants, 57 male (21%). African-Americans represented the majority at 147 (51%), 98 (36%) white participants, 20 (6%) unknown (did not listed race/ethnicity), 13 (4%) American Indian, 8 (3%) Hispanic and 2 (1%) other. Nontraditional age students took advantage of the articulation more so than traditional students under the age 24 participated of which 14 participated. There were 47 students 24-30 age group, 81 students 31-39 age group, 54 students 40-49 age group, 11 students 50-59 age group, 1 student over 60, and 3 ages were unknown.

The total program enrollment of 287 students obtained the results of 164 graduates, 29 currently enrolled (completing their final semesters), 27 stopped attending with a good academic standing, 36 stopped attending on academic probation or suspension status, 7 participants withdrew from the university, and 24 participants enrolled in program while at the community college, however did not transfer to the state after receiving services. Articulation services included one-on-one counseling session, a dedicated degree plan, advising at both the community college and university, waived application fee (\$40), admission to university, and possible financial aid assistance. These students completed the admissions process; transcripts were uploaded in the Banner data system and their progress was tracked at the community college but did not enroll at the university.

The primary independent variables are online versus face-to-face. The comparison between the groups were tested on time to degree attainment, grade point average and graduation. The results of the study showed there is a statistical difference in time to degree attainment. For research question 1a, can articulation participants obtain a baccalaureate degree in the same time regardless of whether they enroll on online or face-to-face degree completion method?, the researcher was able to reject the null hypothesis of no significant difference. Statistical analysis was conducted using an independent samples t-test (comparison of mean time to degree completion for online students versus face-to-face students); because DV (time to degree completion by number of semesters) is continuous. The results of this analysis indicates that there is a significant difference in the time it takes students to complete degrees, $t(116.04) = -2.69, p < .01$, with students online degree completion students ($M = 4.59, SD = 2.35$) taking less time to complete degrees than face-to-face students ($M = 5.59, SD = 2.85$).

The online student averages a time to degree completion was 4.59 semesters while the face-to-face student averaged a time to degree completion was 5.9 semesters. Online degree completion allowed students the lowest time period of two semesters enrolled to achieve degree completion (graduation). They were able to enroll in an average of 15 credit hours per semester to meet the universities requirements of 25% of the program must be from the degree granting institution. The most semesters enrolled at the university to achieve degree completion was 16. The researcher discovered the large number can be attributed to students who changed majors; dual majored or were experienced academic difficulty.

For research question 2a, is there a difference in grade point average based on online or face-to-face degree completion method?, the researcher supported the null hypothesis that there is no significant difference in grade point average for online and face to face articulation

participants. Statistical analysis was conducted using an independent samples t-test (comparison of final grade point average for online students versus face-to-face students); because DV (final grade point average) is continuous. The results of this analysis indicates no significant difference in final GPAs of online degree completion students (M=2.70, SD=1.17) and face-to-face degree completion students (M=2.91, SD=0.85). There were differences in grade point average based on enrollment status. The average grade point average of all graduates (online and face-to-face) was 3.12. Currently enrolled students are maintaining a 2.7 grade point average, students who stopped enrollment in good standing left with an average of 3.72 average and those students in poor academic standing averaged a .75 grade point average. Students who withdrew from the university left with an average of a 1.14.

For research question 3a, is there a difference in graduation rates based on online or face-to-face degree completion method?, the researcher supported the null hypothesis that there is no significant difference in baccalaureate graduation rates for online and face to face articulation participants. Statistical Analysis was conducted using Chi-square test of association, because the DV (graduated) is categorical. Chi-Square Test: A chi-square test indicates that the association between graduating and degree completion format is not significant, $\chi^2 (1, n=263) = 0.060$, $p=0.806$.

Data was collected to determine how significant student swirl is among articulation participants and to determine how many institution articulation students attend prior to finding their degree granting university. The results indicated that students transferring into the university had attended an average of two colleges prior to enrolling. Articulation participants had attended at least one other institution to qualify as a transfer student and as many as eight community college/universities before enrolling at the state university.

This study evaluated the transfer hours obtained by the articulation participant to determine if they are taking excessive hours before transferring into program and total hours needed to degree completion. The research data did not indicate if the student had completed an associated degree before transferring. A study on the effectiveness of articulation agreements Perkins (2010), revealed that there is no advantage to the student in transferring before completing an associate's degree, and there may in fact be a modest disadvantage when having to complete a specific block of classes at the community college.

This study also wanted to determine if education cost and time to graduation is reduced through the use of articulation programs. The number of transfer hours ranged from zero for students who participated in the program but did not enroll at the university to 245 credit hours transferred in from a student who had enrolled in multiple degree programs prior to transferring into the articulation program. Participants transferred in an average 110 credit hours, taking an average of 45 hours at the university and graduation with a total of 160 hours. Doyle (2006) found a positive relationship between the number of credits accepted by the four-year institution and transfer students' persistence and baccalaureate attainment rates. The average degree program at the university is 125 credit hours. That is a significant increase of courses completed above the required courses for the degree program which would indicate no cost savings. .

Retention

The results indicated that there are issues in retention of articulation students. Students who were in good academic standing (grade point average above 2.0) may have had external issues that prohibit them from completion. Many of the stop outs left the university with grade point averages at or above a 3.0. This would lead the researcher to believe nonacademic issues were involved. The students may have relocated or changed schools due to the fact that the

university is in close proximity to a large military installation. What is beneficial is that the program can be completed online for those students in good academic standing that may want to return to the university and continue their curriculum.

In Schmitgal's (2009) qualitative study on student's perception, 25 articulation students were interviewed to obtain their overall perspective of the articulation process. Some of the overall themes were academic preparedness, transfer shock, academic resources and academic strategies for university courses. The research participants stated the courses at the university were academically more rigorous, required more preparation. The students stated that faculty at the university expected more from them academically than the community college faculty. This new revelation now required students to work twice as hard to achieve the same grade. Articulation students found it necessary to increase their time management skills, incorporate more time for assignments and studying and be prepared for class.

The researcher established that 36 students were placed on academic suspension/probation with a grade point average less than 2.0 who did not complete the program. According to the University's Academic Policy and Procedure, students who fail to maintain a cumulative grade point average of at least 2.0 at the end of the semester were placed on academic probation and permitted to enroll in a maximum of 14 credits for the subsequent semester. Students on probation are required to complete an Academic Success Plan with their advisors.

Furthermore if a student's grade point average is below 2.0, the student will be placed on academic suspension/ reinstatement and will not be permitted to re-enroll (however, the student will have to successfully appeal for continued financial aid eligibility). If a student's GPA is below 2.0 for the second time the student will be placed on academic suspension, will not be

eligible for financial aid, and will not be permitted to re-enroll without successfully appealing academic suspension or attending summer school to improve the GPA. A student who is placed on suspension more than two times will not be permitted to re-enroll except through the provisions of the Academic Fresh Start program.

The results from Schmitigal's (2009) study would lead the researcher to consider a student's inability to adapt to university level course along with the university's academic policies could have prevented students from continuing. Additionally, the lack of online proficiency and time management skills would also factor in a student's academic success. If a student breaks enrollment they are not eligible to be reinstated in the dual enrollment articulation program, however they can return to the university.

Retention strategies for articulation students

Conclusion

The demographics of the typical college student are changing. Many are nontraditional students and choosing community college to start their education. They enroll in an articulation program for the convenience of remaining close to home. The students found their local community college to offer a comfortable environment that is convenient to family, work and less costly. Educators and administrators alike have placed increased emphasis on student transfer and transfer recruitment. Articulation agreements, and now degree pathways, have become the solution to seamless transfer for both the community college and the university systems. This study has shown a positive graduation rate, respectable grade point averages, and degree obtainment in a timely manner. The programs can work; however, it does take resources and commitment from both institutions. Beyond the agreement, resources must be allocated to ensure transfer students are successful. University liaisons, advisors, and faculty

must work with students to ensure they are familiar with options available to them and encourage their use. According to Schmitigal (2009), when it came to academic resources, most articulation students were still utilizing resources such as library, tutoring, and writing labs at their community college, even though resources were available to them at the university. This is understandable practices for online students; however, local students still felt more comfortable in a community college environment. Socially students must feel some connection to the university, as research has shown that even when articulation students were invited to events at the university, they did not attend due to not feeling part of the community. More can be done to incorporate both the online and face-to-face transfer student into the university culture. Once a university has attracted a student by articulation agreements and degree pathways, it must continue to work aggressively with the students to ensure degree completion.

Implications

The objective is to determine the impact of learning method on student success and program effectiveness. The findings indicate both online and face-to-face are equally effective in degree completion. Articulation agreements and community college and university partnerships have been an area for research from many perspectives. Considerable research has been conducted on articulation agreements from the perspective of student satisfaction and administrator perception (Schmitigal, 2009, Slotnick, 2010). Substantial research is available on policies and procedures as well as comparison to native and transfer students (Tenbergen, 2010). Research has also been conducted on specific majors, articulation models and development (Davis, 2009; Perkins, 2010). There was limited data on the persistence and retention of articulation students based on the degree completion method, thus posed a gap in the literature. The researcher is confident this study has close the gap by provide significant information on

academic success, persistence and retention as well as incorporating online degree completion into degree pathways. This study focuses on program results.

The findings in this research provide valuable information for administrators, faculty, and student support staff that are responsible for implementing and upholding articulation agreements. Time and funding (dedicated personnel) is invested to initiate, activate, and maintain the articulation program operational. Analyzing cost/benefit of developing collaborations is significant. There needs to be data to indicate if the program is worth all of the coordination and efforts of both the community college and university personnel.

The data also indicated weak areas that need attention that involve enrollment and retention. Students who did not enroll in the program and received advisement, degree plans, financial aid assistance should have followed up communications with the university personnel to determine if the issue is one that is manageable so the student can be retained at the university. Articulation students who stopped out in good academic standing should also be able to contact a dedicated university staff person to indicate if a life issue has occurred and if any assistance can be provided. This is important because the degree completion program online would have allowed the student to continue in the program from anywhere with great flexibility. Articulations students who were placed on academic suspension/probation should have received academic resources to assist them with completion. The research viewed factors effecting transfer retention and academic success. The effectiveness of the program can directly affect the transfer process, retention, graduation and funding for recruitment.

Limitations

There are several limitations to the study. The research location did not have an initial automated data system in place to track dual enrolled articulation students. It is possible that the

study may have missed students from 2006-2010 who were manually recorded prior to being tracked in Banner. The study was also not able to utilize the largest population of articulation students from the School of Education. The School of Education did not offer an online degree completion option at the time of this study.

Many students took advantage of the articulation degree plan without formally enrolling into the program. Therefore, they received the benefits of advising, transferring in more credit hours, and receiving financial aid advice without completing a consortium agreement. Some students, after receiving the benefits, decided to take the additional classes to complete the university degree at the community college and transfer straight into the university's degree completion program. There were no official methods in place to track the students who received academic counseling from the University Liaison but did not formally commit to the program.

During the summer of 2013, the university decided to discontinue the dual enrollment articulation plan. Current students are allowed to complete the program as long as they remained continuously enrolled. The benefits remain in place; however, students are not allowed to be dual enrolled in two institutions utilizing financial aid. Students are still permitted to transfer in beyond 60 credit hours for some programs. The university liaison was relocated and reassigned to another department. The abruptness in program change could have an effect on enrollment and retention of students. Students not fully understanding how the change affected them chose other avenues for degree completion. Enrollment from transfer students at some community colleges declined after the program was revamped.

Recommendations for Future Research

A qualitative research study would be useful to determine what happen to the stop outs and University withdrawals. There are many questions that still need to be answered. Did

factors of academic difficulty, social connectedness, faculty, advisement, or overall customer service have any bearing on retention? What were the problems dealing with personal issues as moving, financial, or other life event? Was online learning a good fit with some students? Was course rigor a factor?

The university and many other universities in the UNC system has moved to a degree pathway program where students can go to the Transfer and Advisement, Admissions, or Academic department website to locate community college/university equivalency curriculum guides. Transfer students can locate the guides and self-advise. There are definite advantages and disadvantages to self-advisement. Self-advisement through published degree plans eliminates additional work for transfer advisors. Transfer students will usually complete their associate's degree before transferring and follow the university degree plan. The disadvantage to self-advisement is that the degree pathway will still leave some questions unanswered. Transfer students will have questions and individual situations beyond knowing what will transfer. Further research should be conducted to compare articulation agreements to degree pathways to determine if there is any significant outcome on transfer, retention, and graduation. In addition the researcher has suggested the following recommendations to improve student success and persistence.

Recommendations

1. Implement an assessment and tracking system with dedicated personnel to track student progress and performance.
2. Survey transfer students to see if they utilized degree plans to self-advise and at what point in there transfer process.
3. Develop transfer articulation cohorts at the community college and university.

4. Dedicated academic faculty should become involved with the articulation students to ensure they know what is expected of them and how the courses will be set up.
5. Invite students in transition from the community college to join academic organizations (Criminal Justice club, Business Admin club, honor societies, commuter clubs, etc.).
6. Invite them to participate in learning activities, speaker series, and special projects on campus sponsored by their academic major.
7. Maintain an updated transfer articulation website with transfer equivalencies.
8. Seek minority and at-risk student populations that normally are not seeking transfer and encourage them to utilize degree pathways to continue their education.
9. Initiate reverse transfer articulation for students who transfer before completing their associate's degree. Students should be able to transfer the credits back to the community college to receive their associate's degree. This will increase graduates rates for the community college and will be a win-win for both institutions.
10. Collaborative cohorts would allow students at the community college to take classes together.
11. Providing resources to articulation participants to help them persist is important. If student find the transition or curriculum too difficult they will inform their community college faculty, staff and students that the program is not a viable option. This could reduce any negative feedback.
12. Compare community college grade point averages with university grade point averages to see if students were able to maintain academic standing once they transferred.
13. Encourage transfer orientation courses at both institutions.

14. Encourage students become their own advocates in the transfer process. They need to learn what questions to ask and who to ask.
15. Encourage students need to prepare themselves academically. The rigor of university classes can catch transfer students unprepared.
16. Provide holistic and intrusive transfer advising to ensure students are receiving transfer information before and after the transfer process.
17. Implement programs for students placed on academic probation or suspension before they drop out.
18. Implement surveys and suggestion boxes to receive transfer student feedback.
19. Once a student has declared a major the university liaison is no longer involved with the student as a professor from the major is assigned to them. It is important to remain involved with the participants until graduation.

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APPENDIX A: UNIVERSITY IRB APPROVAL LETTER

11 August, 2014

To: Darnette Hall
IRB #: 2015-P-0002
Study: *Articulation Agreements: Academic Success, Persistence and Graduation in On-line and Face-to-Face Degree Completion Programs*
Re: Approval
Submission Type: New
Expiration Date: 10 August 2015
Co PI: none

Your human subject application, assigned IRB # **2015-P-0002**, has been reviewed and **approved** under **EXEMPT** by the Institutional Review Board.

Should the approved protocol change in the future, you are obligated to contact the Offices of Sponsored Research and Programs to obtain IRB approval for the change(s) before proceeding with your research. You are also required to contact the Office of Sponsored Research and Programs prior to your approval expiration date if your research has not been completed and your study closed. At that time you will be eligible to apply for approval to continue your study.

Please be reminded that you are **required** to indicate your study number on all documents relating to your study. If you have any questions, please feel free to contact Dr. Carla Padilla, Export Control and Compliance Officer at . Please reference your proposal title and number in all electronic communications.

This study was reviewed in accordance with federal regulations governing human subjects research including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), where applicable.

Sincerely,

Human Rights in Research Committee

APPENDIX B: LIBERTY UNIVERSITY IRB APPROVAL LETTER

LIBERTY UNIVERSITY

INSTITUTIONAL REVIEW BOARD

August 13, 2014

Darnette Hall

IRB Exemption 1916.081314: Articulation Agreements: Academic Success, Persistence, and Graduation from Online and Face-to-Face Degree Completion Programs

Dear Darnette,

The Liberty University Institutional Review Board has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and that no further IRB oversight is required.

Your study falls under exemption category 46.101 (b)(4), which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Please note that this exemption only applies to your current research application, and that any changes to your protocol must be reported to the Liberty IRB for verification of continued exemption status. You may report these changes by submitting a change in protocol form or a new application to the IRB and referencing the above IRB Exemption number.

If you have any questions about this exemption, or need assistance in determining whether possible changes to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,

Fernando Garzon, Psy.D.
Professor, IRB Chair
Counseling

(434) 592-4054

LIBERTY
UNIVERSITY.

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