

ACADEMIC SUCCESS OF TRANSFER STUDENTS AND
NATIVE STUDENTS IN SOUTHEAST ALABAMA

Except where reference is made to the work of others, the work described in this dissertation is my own or was done in collaboration with my advisory committee. This dissertation does not include proprietary or classified information.

Keith W. Sessions

Certificate of Approval:

Caroline Dunn
Professor
Rehabilitation and
Special Education

Marie F. Kraska, Chair
Mildred Cheshire Fraley
Distinguished Professor
Educational Foundations,
Leadership, and
Technology

Olin Adams
Associate Professor
Educational Foundations,
Leadership, and
Technology

George T. Flowers
Interim Dean
Graduate School

ACADEMIC SUCCESS OF TRANSFER STUDENTS AND
NATIVE STUDENTS IN SOUTHEAST ALABAMA

Keith W. Sessions

A Dissertation

Submitted to

the Graduate Faculty of

Auburn University

in Partial Fulfillment of the

Requirements for the

Degree of

Doctor of Education

Auburn University
May 10, 2007

ACADEMIC SUCCESS OF TRANSFER STUDENTS AND
NATIVE STUDENTS IN SOUTHEAST ALABAMA

Keith W. Sessions

Permission is granted to Auburn University to make copies of this dissertation at its discretion, upon request of individuals or institutions and at their expense. The author reserves all publication rights

Signature of Author

Date of Graduation

VITA

Keith W. Sessions, son of Jimmy R. Sessions and Phyllis (Wilkes) Sessions, was born in Birmingham, Alabama on June 7, 1968. At the age of three his father passed away unexpectedly. A few years later his mother re-married to Joseph D. Talmadge (step-father). He graduated from Enterprise High School in Coffee County, Alabama in 1986. He received an Associate in Science Degree from Enterprise State Junior College (now Enterprise-Ozark Community College) in 1988. After transferring to Auburn University, he completed his Bachelor of Science in Business there in 1990. He later received a Masters in Business Administration from the University of South Alabama in 1993. He began his career in higher education administration in 1994 as an Area Coordinator for the newly formed state articulation program (AGSC/STARS). He served in this role until the late 1990's when he was named Assistant Director of the AGSC/STARS Program. From 2001 to 2002 he worked as the Director of Distance Education at Southern Union State Community College. From 2002 to 2003 he worked as the Undergraduate Academic Program Coordinator at Auburn University. In September of 2003, he was named as the first Executive Director of the AGSC/STARS Program. He continues in this role today. He enrolled in the Auburn University Graduate School in the Fall of 2000 to pursue a doctoral degree in Higher Education Administration. He was married to Carlene A. Dorris on March 15, 1997. They have three sons, Richard W. Sessions, Parker K. Sessions, and Talmadge R. Sessions.

DISSERTATION ABSTRACT
ACADEMIC SUCCESS OF TRANSFER STUDENTS AND
NATIVE STUDENTS IN SOUTHEAST ALABAMA

Keith W. Sessions

Doctor of Education, May 10, 2007
(M.B.A., University of South Alabama, 1993)
(B.S., Auburn University, 1990)
(A.S., Enterprise State Junior College, 1988)

101 Typed Pages

Directed by Marie F. Kraska

The purpose of the study was to identify variables associated with the baccalaureate graduation status and number of terms enrolled for transfer students who have completed a portion (at least 30 semester hours) of their undergraduate program at an Alabama community college and who later transferred to a public four-year institution in Alabama to complete their baccalaureate degree and the baccalaureate graduation status and time to graduation of native students who completed all of their baccalaureate degree at one four year-university.

In conducting the study, the researcher randomly selected academic records of two student groups: (1) native students who began their college career at Troy University, and (2) transfer students who began their college career at one of the primary feeder

community colleges for Troy University between 1998 and 2000, and who later transferred at least 30 semester hours of credit to Troy University with a goal of completing their baccalaureate degree there. In addition, the researcher equally subdivided these two groups (transfer or native) by declared major into three discipline categories: business, education, or nursing. The total number of students in the data set was 300. The dependent variable was graduation status – whether or not a student was graduated. Student demographic variables were as follows: (a) age, (b) gender, (c) ethnicity, (d) major, (e) type (transfer or native), (f) cumulative grade point average, and (g) number of terms enrolled.

Results from the statistical analysis showed that transfer students had a slightly higher mean cumulative grade point average than the native students. In addition, the transfer students had been graduated at a slightly higher rate than the native students. While the transfer students had higher grade point averages and were graduated more often, native students were enrolled in fewer terms during their college experience. There was a statistically significant relationship between the predictor variables of college major, student type (transfer or native), cumulative grade point average, and terms enrolled and whether or not a person was graduated with a baccalaureate degree. There was no statistically significant relationship between the predictor variables of age, gender, and ethnicity and whether or not a person was graduated with a baccalaureate degree.

ACKNOWLEDGEMENTS

I am truly grateful to the members of my committee who supported me throughout this process. I want to thank Dr. Kraska for chairing my dissertation committee. She has always been there to encourage and guide me as I learned how to do quality research. I will always give her the credit for my success as a doctoral student. In addition, I am forever indebted to the other two members of my committee, Dr. Olin Adams, and Dr. Caroline Dunn, for their support and guidance. Not only were my technical questions answered regarding the dissertation process, but I always felt a tremendous sense of collegiality with this group of distinguished professors. Thank you all for your help.

Sincere thanks are also offered to the administration of Troy University. I could not have asked for more cooperative support and assistance as I attended classes and worked on my dissertation.

I could not have completed my degree without the financial and loving support of my parents Joe and Phyllis Talmadge. They paid every tuition bill without complaint. They also encouraged and loved me throughout my six years in the doctoral program.

I owe my greatest amount of gratitude to my wife, Carlene, and my sons, Wil, Parker, and Tal. I am grateful for all of the sacrifices you made.

Finally, I want to thank my Lord and Savior, Jesus Christ. For without my Him nothing is possible.

Style manual used: Publication Manual of the American Psychological Association, 5th ed. (2001), Washington DC.

Computer software used: Microsoft Word 2002 and the Statistical Package for the Social Sciences (SPSS) Version 14.0

TABLE OF CONTENTS

LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER 1. INTRODUCTION	1
Statement of Research Problem	5
Purpose of the Study	6
Research Questions	6
Statement of the Hypothesis	7
Definition of Terms	7
Limitations of the Study	9
Assumptions of the Study	10
Significance of the Study	10
CHAPTER 2. REVIEW OF THE LITERATURE	11
Increased Student Mobility and Growth of Transfer Student Populations	11
Increased Need for Articulation and Transfer Agreements	15
Impact of Transfer Articulation Agreements	16
Transfer Student Barriers	18
Profiles of Transfer and Native Students	19
Chronological Review of Studies Comparing Academic Success of Transfer and Native Students in Other States	21
Summary	28
CHAPTER 3. METHOD OF STUDY AND INSTRUMENTATION	30
Design of Study	30
Sources of Data and Collection Procedures	31
Privacy and Confidentiality of Student Data Collected	32
Instrumentation	33
Method of Procedure	33
Procedure for Data Analysis	33
Profiles of Institutions Used in this Study	34
Summary	38

CHAPTER 4. DATA ANALYSIS AND RESULTS	39
Data Analysis	39
Results for Research Question One	40
Demographic Characteristics for All Students	40
Demographic Characteristics for All Native Students.....	46
Demographic Characteristics for Native Business Students.....	48
Demographic Characteristics for Native Education Students.....	49
Demographic Characteristics for Native Nursing Students	50
Demographic Characteristics for All Transfer Students.....	50
Demographic Characteristics for Transfer Business Students....	53
Demographic Characteristics for Transfer Education Students..	53
Demographic Characteristics for Transfer Nursing Students	54
Results for Research Question Two.....	55
Results for Research Question Three.....	56
Summary	61
CHAPTER 5. SUMMARY AND CONCLUSIONS	63
Overview of the Study	64
Summary of the Results	66
Conclusions.....	68
Recommendations.....	69
REFERENCES	72
APPENDICES.....	78
Appendix A – IRB Approval Letter from Auburn University.....	79
Appendix B – Letter Requesting and Receiving Access to Troy University Student Records.....	81
Appendix C – Recording Form Used to Collect Student Data	83
Appendix D – Letter of Permission to Re-Print Figure 1	85
Appendix E – Letter of Permission to Re-Print Table 1 and Table 2	87

LIST OF TABLES

Table 1.	Ranking of Transfer Obstacles by Four- and Two-Year Institutions	19
Table 2.	A Demographic Comparison of Students in Two- and Four-Year Institutions	20
Table 3.	Mean, Median, Minimum, and Maximum Age by Student Type.....	41
Table 4.	Number and Frequency for Gender by Student Type.....	42
Table 5.	Number and Frequency for Ethnicity by Student Type	43
Table 6.	Mean, Median, Minimum, and Maximum GPA by Student Type	44
Table 7.	Number and Frequency for Graduation Status by Student Type.....	45
Table 8.	Summary of Descriptive Data for Native Students.....	47
Table 9.	Summary of Descriptive Data for Transfer Students.....	51
Table 10.	Mean, Median, Minimum, and Maximum Terms Enrolled by Student Type	56
Table 11.	Contingency Table for Hosmer and Lemeshow Test	58
Table 12.	Contingency Table for Model Predictive Accuracy	59
Table 13.	Variables in the Equation.....	61

LIST OF FIGURES

Figure 1. Types of First-Time Transfers Between 1995 and 2001	13
Figure 2. Map With Locations of Two-Year and Four-Year Institutions Used in Study	38

CHAPTER I

INTRODUCTION

For decades, students attending community colleges throughout the United States have faced the possibility of losing course credit hours upon transfer to a four-year college or institution. Community college students may be advised to take specific courses with the intent of receiving course credit for their coursework upon transfer to a four-year institution. Money and time may be wasted if students take courses at a community college and find that some course credit is not transferable to a four-year institution. Students attending community colleges in Alabama may encounter this same problem of losing course credit when they transfer from a community college to a four-year institution. A number of states, including Alabama, have taken a proactive approach, either through state legislative mandates or state educational programs, to attempt to address this transfer issue and provide students with accurate and more transfer information.

In 1994, the Alabama State Legislature addressed the transfer credit issue by passing ACT 94-202. There are two main provisions of this act:

1. This Act Created the Alabama Articulation and General Studies Committee (AGSC) to implement provisions of the Act, and

2. This Act Designated the Statewide Transfer and Articulation Reporting System (STARS) as the vehicle for dissemination of information and implementation of AGSC policy (Alabama Legislative Act, 94-202).

Within the provisions, the AGSC was given the following charges:

1. Develop a statewide general studies curriculum by September 1, 1998.
2. Develop a statewide articulation agreement by September 1, 1999.
3. Examine the need for uniform course numbering system, course titles, and descriptions.
4. Resolve problems in administration or interpretation of articulation agreement (Alabama Legislative Act, 94-202).

This legislative mandate impacts all public institutions of higher education in Alabama.

While private colleges and universities in Alabama are not required to adhere to the provisions set forth by the Articulation and General Studies Committee (AGSC), many of them have adjusted their transfer policies and procedures to be consistent with the existing AGSC policy in order to improve the transfer process to their campuses. As of the summer of 2004, the first two charges listed above were accomplished by the AGSC.

In regard to the third provision, the AGSC examined the need for a uniform course numbering system. The committee concluded that the first two charges could be accomplished using the existing numbering systems currently in place at institutions across the state. The AGSC chose not to mandate a common course numbering system for all public institutions of higher education in Alabama due the high conversion cost that all fourteen of the four-year institutions would face. The fourth charge is on-going. To meet the fourth charge, the AGSC holds meetings every quarter (three months) to

address and resolve problems and/or provide interpretations of the state articulation agreement as the need arises.

While the AGSC sets the state articulation policy, the Statewide Transfer and Articulation Reporting System (STARS) is the web-based information system used by students, advisors, counselors, faculty, staff, and administrators to obtain AGSC approved transfer information. The STARS System (<http://stars.troyst.edu>), maintained and governed by the AGSC, provides students attending two-year community colleges with web access to AGSC approved transfer guides tailored to the student's chosen major. These transfer guides can prevent loss of course credit for thousands of students each year. Since 1998, over 400,000 students have obtained STARS Transfer Guides. In an average month over 6,000 students, advisors, and counselors access the STARS System to obtain up-to-date transfer information.

During the 2001 and 2002 academic year, the AGSC hired an outside consulting group to evaluate the impact of the articulation program on higher education in Alabama. The consulting group used surveys, interviews, focus groups, and existing STARS usage data to evaluate the articulation program. The goals of the AGSC/STARS evaluation project were as follows:

1. Determine the degree to which the intent of Act 94-202 has been achieved;
2. Evaluate the effectiveness of the organizational structure established by the statute;
3. Assess the degree to which AGSC is fulfilling its responsibilities; and
4. Evaluate the impact of the articulation process on higher education in Alabama (Crump, O'Neil, & Wilds, 2002).

The evaluation project took more than two years to complete. The conclusion to the final report is summarized as follows.

Data and information from practically all sources provide high marks for [both] the AGSC and STARS [Program]. The survey results from all three groups overwhelmingly supported STARS in terms of the ratings and the comments that were offered. Focus groups of both community college and university transfer students were enthusiastic in their comments about STARS. Community college advisors, faculty and administrators participating in focus groups were strong advocates for STARS, the general studies curriculum, and the articulation of degree programs. They cited the legislation and the achievements of the AGSC and STARS as instrumental in creating a climate of cooperation and communication between 35 community colleges and state universities. They were complimentary of the STARS staff and the courteous and professional manner of the personnel. The focus group of university transfer appeals officials also supported the value of STARS in facilitating the transfer process and reducing significantly the number of transfer appeals. Participants acknowledged several additional benefits from STARS and the statewide articulation of degree programs. Results from interviews with presidents, former AGSC members, and legislators provided additional support for the accomplishments of the AGSC. In fact, some comments might be interpreted as indicating that the committee is doing more than its responsibilities require (Crump et al., 2002, p. 34-35).

The final evaluation report also included 12 recommendations. While the majority of the recommendations centered on improving day-to-day procedures and

processes, the twelfth and final recommendation focused on the need for further research. The consulting group wrote, “The AGSC needs to conduct a carefully designed study to evaluate the [academic] success of community college students who transfer to state universities. Much useful information could be gained from a well-designed study evaluating the success of transfer students. Information about factors affecting student success might provide useful feedback to community colleges and have important implications for the general studies curriculum. [As the cost of higher education continues to rise in Alabama, the on-going evaluation] of the effectiveness of academic programs should be a primary goal” (Crump et al., 2002, p. 40).

Statement of the Research Problem

Most four-year universities in Alabama would agree that transfer student populations have a significant impact on the overall success of their institutions. Four-year universities throughout the state are now required, by law, to accept AGSC designated transfer coursework. In addition, there is an expectation that transfer students who use the articulation program and who transfer to other in-state public institutions of higher education should graduate in a similar timeframe as native students in similar majors. The focus of this study is the lack of information related to the variables associated with graduation status (graduated/not graduated) and time to graduation (number of terms) of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate program at one institution.

Purpose of the Study

The purpose of the study was to identify variables associated with the baccalaureate graduation status and number of terms enrolled for transfer students who have completed a portion (at least 30 semester hours) of their undergraduate program at an Alabama community college and who later transferred to a public four-year institution in Alabama to complete their baccalaureate degree and the baccalaureate graduation status and time to graduation of native students who completed all of their baccalaureate degree at one four year-university.

Research Questions

The following research questions were addressed in this study:

1. What are the demographic characteristics of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama?
2. What are the number of terms enrolled for students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama?
3. To what extent is there a significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (transfer or native), cumulative GPA, and whether or not a person was graduated with a baccalaureate degree?

Statement of the Hypothesis

The following null hypothesis was formulated to answer research question 3:

Ho₁: There is no statistically significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (native or transfer), cumulative GPA and whether or not a person was graduated with a baccalaureate degree.

Definition of Terms

1. Articulation Agreements – Agreements that specify how transfer credit will be accepted from one institution to another and may be written in terms of specific courses, or even partnerships involving entire programs. These agreements offer the student an opportunity to more effectively plan their academic career, minimize loss of credit, and avoid repeated coursework at the receiving institution (Arizona State University Official Website, 2006).
2. Articulation and General Studies Committee (AGSC) – Committee formed in Alabama in 1994 through State Legislative ACT 94-202 and given the charge to develop, implement, and monitor the statewide general studies program/articulation agreement for the transfer of credit among all public institutions of higher education (What is the AGSC?, 2006).
3. Grade Point Average (GPA) – a measure of scholastic attainment computed by dividing the total number of grade points received by the total number of credits or hours of course work taken (Retrieved from <http://www.dictionary.com>, 2006)
4. Graduation Status – Determination as to whether or not a student has graduated or not graduated.

5. Native Student – a person who is attending an institution of postsecondary education either in person or by correspondence and who has not attended a previous postsecondary institution with or without credit earned (AGSC Definitions, 1997).
6. Retrospective Study – A study for which subjects are selected from groups based on subjects' response levels and explanatory values are then determined (Ramsey & Schafer, 2002).
7. Statewide Transfer and Articulation Reporting System (STARS) – a web-accessible database system which provides guidance and direction for prospective transfer students in the State of Alabama based on the current articulation agreement set forth by the AGSC. STARS allows public two-year students in Alabama to obtain a Transfer Guide/Agreement for the major of their choice. This guide/agreement, if used correctly, guides students through their first two years of coursework and prevents loss of credit hours upon transfer to the appropriate public four-year university in Alabama (What is STARS?, 2006).
8. Term – a measure of time used in higher education to represent a definite period in which classes are offered (usually listed as semesters or quarters)
9. Time to Graduation – the number of terms (semesters or quarters) it takes for a student to graduate with a baccalaureate degree from a university or college
10. Transfer Student – a student who has been enrolled at a two-year or four-year institution of higher education and then leaves that institution to enroll in another institution of higher education (AGSC Definitions, 1997).

Limitations of the Study

This study had the following limitations.

1. Transfer student success was measured based on graduation status and time to graduation as defined in the definition of terms section and as compared to native students. That is, the graduate status and time to graduation of native students may not be an appropriate benchmark to use for transfer students.
2. Only those community college transfer students and native students who majored in business, education, and nursing were compared. These three majors tend to be the most common, not only at Troy University (institution used in study), but throughout Alabama. The study was limited to students who were enrolled in business, education, or nursing programs.
3. The transfer and native students studied all had begun their academic studies between 1998 and 2000. This time frame provided both groups the opportunity (between six and eight years) to have completed the baccalaureate degree successfully.
4. The study was limited by the kind of information that can be obtained on the two student groups (transfer or native) in the study from current Troy University records. For example, the data were limited to the following variables: (1) age, (2) gender, (3) ethnicity, (4) college major, (5) cumulative GPA, (6) graduation status, and (7) terms enrolled.

Assumptions of the Study

This study was based on the following assumptions:

1. The accuracy of data collected was limited by and dependent on the accuracy of collection procedure used by the researcher and the accuracy and completeness of student records from which data were obtained.
2. A recording instrument was developed that permitted the researcher to gather transfer and native student data in an unbiased and consistent manner.
3. Student records used in this study, both native and transfer, had adequate time (at least six years) to make progress toward completion of their chosen degrees.

Significance of the Study

There is a paucity of information pertaining to the graduation status and time to graduation of students in Alabama who transfer from community colleges to four-year institutions in Alabama. While other states have conducted similar studies, Alabama has not.

Recent AGSC articulation policy mandates that research be conducted that measures success rates of transfer students from various community colleges across the state (Crump et. al, 2002). Public four-year institutions are now required by law to accept AGSC approved coursework from the various community colleges in Alabama and to graduate these transfer students in a timely manner.

CHAPTER II

REVIEW OF LITERATURE

Chapter I provided background information and a theoretical framework for this study, statement of the research problem, significance of the study, purpose of the study, research questions, hypothesis, and the limitations and assumptions of the study. Chapter II presents a review of research and literature related to the trends and growth of transfer students across the United States over the last thirty years, the increased need for transfer and articulation agreements to enhance and improve the transferability of coursework from one institution to another, the impact of articulation agreements on higher education, transfer student barriers, profiles of transfer and native students, and a chronological review of studies comparing the academic success of transfer and native students in other states.

Increased Student Mobility and Growth of Transfer Student Populations

Since the early 1900's the growth of two-year colleges and the students they serve has been astounding. Over the last thirty years, tremendous growth has taken place within the community college sector. From 1972 to 1992, community college enrollment at the national level almost tripled (Shabazz, 1995). According to the National Center for Education Statistics, it is believed that the two-year college system is now educating approximately one-half of the nation's first-year postsecondary students in the United

States (Bagnato, 2002). Another group of students that is growing are called “reverse transfer students.” These students started at a four-year college or university and then transferred to a junior or community college. Reverse transfer students account for at least 16% of all community college enrollments throughout the United States (Townsend, 2000).

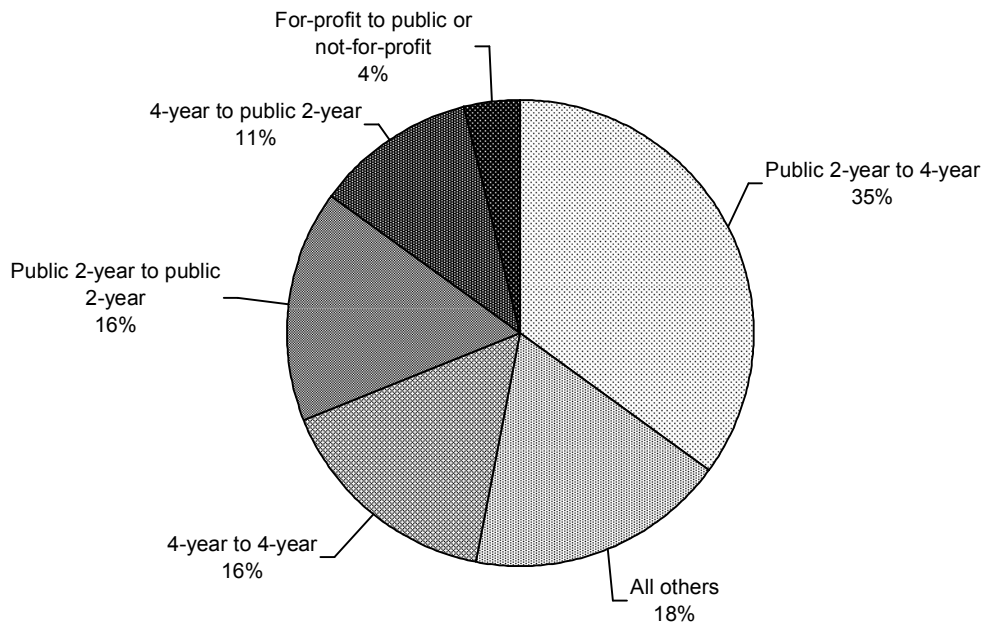
Over the last century, the evolution of the two-year junior or community college has greatly impacted the landscape of higher education in the United States. Gone are the days when the majority of entering freshman begin and end their education at an individual college or university. College graduates of today most likely will have attended multiple institutions of higher education, as they worked toward completion of the baccalaureate degree. Like the world in general, students have also become more mobile and transient in nature. It is not uncommon for students to earn college credit from different institutions in different settings.

Over the last few decades, trends have shown that college students tend to “swirl” or take classes from multiple institutions. Almost one-half (45%) of college seniors took at least one course from another institution before enrolling at their current institution (transfer students); a third took at least one course at another institution after enrolling at their current institution (transient students) (United States Government Accountability Office, 2005). Figure 1, which describes the types of first-time transfers between 1995 and 2001, shows that traditional transfer (public two-year to four-year) accounts for at least one-third of first-time transfer activity.

The extreme growth of technology and information science has changed the employment landscape drastically over the last twenty to thirty years (Carnevale &

Desrochers, 2003). Two decades ago, there were numerous high-paying blue-collar jobs available to high-school graduates. These jobs are rapidly disappearing. Today, more and more companies and employers need to fill positions that require additional knowledge and experiences gained through post-secondary education at a college or university. The increase in these type of job opportunities has been dramatic. In addition, in today’s global economy, many of the industrial jobs are moving overseas at an ever-increasing pace.

Figure 1. Types of first-time transfers between 1995 and 2001.



From United States Government Accountability Office. (2005). Transfer students – postsecondary institutions could promote more consistent consideration of coursework by not basing determinations on accreditation. (GAO Report to Congressional Requesters No. GAO-06-22). Washington, DC: U.S. Government Printing Office. Reprinted with permission of the author.

Students have been getting the message. In 1977, according to the Bureau of Labor Statistics, only 50% of high school graduates went on to attend a college or university. In 1977, over 94% of high school students stated that they planned to continue their education at a post-secondary institution (National Center for Education Statistics, 1998).

In a 2004 study titled “Improving Access to the Baccalaureate,” the American Association of Community Colleges (AACCC) and the American Association of State Colleges and Universities (AASCU), emphasized the growing importance of postsecondary education and training beyond the high school diploma. They stated the following:

For most Americans, the route to the middle class is through postsecondary education and training. On average, a worker with an associate degree will earn 20% to 30% more than a high school graduate, and a worker with a baccalaureate will earn 40% more than a high school graduate. Increased economic returns in the form of wages and benefits lead to greater job flexibility, improved working conditions, lower rates of unemployment, and increased tax revenues, which in turn lead to greater productivity, lower crime rates, and decreased reliance on government support. Higher levels of education also correlate with improved health and life expectancy, increased civic participation rates, improved social status, and greater levels of charitable giving (Improving Access to the Baccalaureate, 2004, p. 1).

Increased Need for Articulation and Transfer Agreements

As a result of this growth in enrollment and attendance at community colleges and universities, the articulation and transfer of academic credit from institution to institution has garnered more importance for academic administrators and faculty. Universities and colleges continue to work together to lay out academic plans and provide transfer information so that students can maximize transfer credit and hopefully graduate in a timely manner. Many institutions and multiple state governments have mandated or implemented articulation/transfer programs to ease the transition and assist the transfer student. Without the existence of an articulation/transfer agreement, some four-year colleges and universities require transfer students to retake courses they have already completed at the community college. This can result in lost money and time for the public taxpayer.

In October of 2005, the United States Government Accountability Office (GAO) conducted a study designed to examine the following: (1) How postsecondary education institutions decide which credits to accept for transfer, (2) how states and accrediting agencies facilitate the credit transfer process, and (3) the implications for students and the federal government of students' inability to transfer credits (GAO, 2005). The GAO found that when determining which credits to accept from transfer students, receiving institutions often were consistent when considering the sending institution's accreditation status, whether academic transfer agreements with the institution existed, and the comparability of coursework taken by the student. However, in most cases, the institutions varied in how they actually evaluated and applied a student's transferable credits (GAO, 2005). To streamline the overall transfer process, most institutions have

established transfer agreements with other institutions that, in most cases, provide for the acceptance of credits from the sending institution without in-depth evaluation. As mentioned above, states have passed legislation or set up statewide initiatives to facilitate and improve the overall articulation and transfer process.

Impact of Transfer Articulation Agreements

Some states [including Alabama], have adopted common statewide transfer agreements or common core curricula that address this problem of fairly awarding transfer credit. When transfer/articulation agreements are not in place, institutions usually compare transfer course descriptions with their current course offerings in an effort to determine transfer credit to be awarded. As a result, students often lose course credit upon transfer. This inability to transfer credit usually results in longer enrollment period, on-going tuition payments, and the increased need for additional financial aid or support. As a result of their study, the GAO recommended that the U.S. Congress consider further amending of the Higher Education Act of 1965 to require postsecondary institutions who are eligible for Title IV funding to not deny the transfer of credit solely on the basis of a sending institution's type of accreditation (GAO, 2005).

In a recent study conducted by the United States Government Accountability Office (GAO), they reported that 69% of postsecondary institutions have entered into voluntary transfer agreements with other institutions, 29% did not specify whether or not they entered into some type of agreement, and about 2% stated that they had no transfer agreements in place (GAO, 2005). Transfer agreements can be voluntary or mandated. Many states have initiated or passed legislation that requires certain courses or programs to be articulated among the state public institutions of higher education. "States facilitate

the transfer of credits among public institutions through various statewide legislation and initiatives that, among other things, support the establishment of statewide transfer agreements, common core curricula, common course numbering systems, and encourage institutions and others to make transfer information available to the public” (GAO, 2005, p. 15). The GAO, through their research, identified 39 states that had some form of legislation that pertained to the acceptance of transfer credit between postsecondary public institutions (2005). In most cases, the legislation passed primarily focuses on facilitating the transfer of academic credit for community college students to public four-year institutions. “While state legislation regarding credit transfer is generally intended to facilitate the transfer of credit among public institutions, a few state statutes require or encourage the involvement of private institutions” (GAO, 2005, p. 18).

The types of agreements vary in what they prescribe or mandate. Some have been designed to make course by course transfer possible. Others articulation requirements are based on the completion of a certain number of semester hours (i.e., 40-45 general studies) or two-year degrees (usually about 60-65 semester hours). Some have gone so far as to require or encourage the establishment of common course numbering systems for all public institutions of higher education within their state. In many cases, these statewide legislative mandates force two-year and four-year institutions to make public the information regarding transfer credit. Most states have accomplished this through the use of public websites.

Maintaining transfer agreements requires considerable commitment. However, these agreements, for the most part, are useful because they make the transfer process “more transparent and allow it to operate more smoothly” (GAO, 2005, p. 11). State

agreements often require the receiving institutions to review course content from various feeder institutions to determine how it compares to their courses. Determinations must be made and these decisions must be reviewed regularly as course content and academic program change. Communication between the two-year colleges and the four-year colleges and universities is very important. For articulation to work, both should be aware of new course offerings or recent course/degree changes. In the last few decades, technology and the use of the internet has greatly helped to facilitate and implement transfer programs across the United States (GAO, 2005).

Transfer Student Barriers

In 2002, the American Association of Community Colleges and the American Association of State Colleges and Universities joined together to research and pinpoint barriers that students (specifically transfer students) must contend with on a regular basis when attempting to transfer and ultimately complete a baccalaureate degree. These two associations collaborated to conduct a survey of their members (i.e., presidents, administrators, faculty, and other support staff). The survey asked participants to rank the major obstacles facing transfer students.

Although they are ranked in a slightly different order, the top three obstacles named by participants at the two-year and four-year institutions relate directly to articulation, advising, and program specific transfer issues and concerns. Results of the survey are displayed in Table 1.

Table 1

Ranking of Transfer Obstacles by Four- and Two-Year Institutions

<u>Transfer Obstacles</u>	<u>Obstacle Ranking</u>	
	<u>Four-Year Institutions</u>	<u>Two-Year Institutions</u>
Articulation	1	2
Reliable Information/Advising	2	1
Program Specific Transfer	3	3
General Education	4	4
AAS/Technical Education Transfer	5	5
Access/Distance Education	6	7
Cost/Financial Aid	7	6

From American Association of Community Colleges & American Association of State Colleges and Universities. (2002). Improving access to the baccalaureate. Retrieved 8/29/05 from http://www.pathtocollege.org/pdf/Lumina_Rpt_AACC.pdf. Reprinted with permission from the author.

Profiles of Transfer and Native Students

The demographic profiles of transfer and native students often differ greatly. The public perception of a college student is that of an 18-year-old single student living in a dormitory or apartment on or near campus who attends full time. On the other hand, the national profile for a community college student is quite different. In the late 1990s, over 50% of all students attending community colleges were students whose parents' highest level of education was a high school diploma or less. In most cases, these first-

generation college students were more likely to be older, have lower incomes, be married, and have dependents than were their non-first-generation peers (NECS, 1998). Table 2 provides a comparison of two-year and four-year student profiles.

Table 2

A Demographic Comparison of Students in Two- and Four-Year Institutions

<u>Profile of Two-Year Student</u>	<u>Profile of Four-Year Student</u>
<ul style="list-style-type: none"> • The average community college student is 29 years old, attends college part time (fewer than 12 credit hours a semester), and holds down a full-time job. • Sixty-three percent of the 11.3 million students who attend community colleges annually are enrolled part time, whereas only 37% attend full time (12+ credit hours a semester). • Of those who do attend college full time, 30% also hold a full-time job. 	<ul style="list-style-type: none"> • The average public four-year student begins postsecondary studies at age 21. • Full-time students represent 79% of undergraduate enrollment at public four-year institutions. • More than half of public four-year undergraduate students (55.9%) enroll full time and work part time. • Students who work full time and enroll part time account for approximately 20% of public four-year undergraduates.

(table continues)

Table 2. (*continued*)

<u>Profile of Two-Year Student</u>	<u>Profile of Four-Year Student</u>
<ul style="list-style-type: none"> • Fifty-eight percent of community college students are women; many have significant family responsibilities that are exacerbated by the difficulties of finding child care. • Fifty-five percent of Latino and Native American undergraduates and 46% of all Black undergraduates attend a community college. 	<ul style="list-style-type: none"> • Women account for 55% of public four-year undergraduate enrollments; many have significant family responsibilities that are exacerbated by the difficulties of finding child care. • Public four-year institutions enroll 31.4% of all Black undergraduates; 35.1% of Latino undergraduates; 34.3% of Native American undergraduates; and 36.9% of Asian/Pacific Islander undergraduates.

From American Association of Community Colleges & American Association of State Colleges and Universities. (2002). Improving access to the baccalaureate. Retrieved 8/29/05 from http://www.pathtocollege.org/pdf/Lumina_Rpt_AACC.pdf. Reprinted with permission from the author.

Chronological Review of Studies Comparing the

Academic Success of Transfer and Native Students in Other States

Since the early 1920s, scholars and higher education administrators throughout the United States have been interested in comparing the educational performance and the academic success of two-year college students with that of native four-year students.

One of the early advocates of the two-year junior college was Leonard V. Koos. In research conducted in the mid-1920s, Koos compared transfer and native students using

grade percentages and intelligence tests. He found the two groups to be quite similar in academic achievement and competence (Koos, 1924). The next year in a different study, Koos looked at scores on the Thurstone Intelligence Test for College Freshmen. The average score by the 206 junior college freshmen was 86.5. The average score for the 5,495 four-year college freshman was 86.6. Koos concluded that similar intelligence distributions and means indicated similar characteristics of students attending both two-year and four-year colleges (1925). In that same year, Koos conducted another study that focused on scores of junior college students and four-year college students who had both taken the Army Alpha Test. In this study Koos compared the scores of 581 junior college freshmen and 4,479 freshmen in six colleges and universities. He found that the mean score for the junior college freshman was 132.7 and the mean score for the college and university students was 136.7 (Koos, 1925). Since then, much research has been conducted that focuses primarily on graduation rates and academic success between these two student populations.

Early studies of junior college transfers were also conducted by Eells in the mid-to late-1920's. Between 1923 and 1927, Eells studied 510 junior college transfers at Stanford University. In this study, he found that the two-year student scored higher on intelligence tests than native students and they also performed better when comparing their grade percentage after their first quarter at Stanford (Eells, 1927).

Eells (1943) conducted another study that included 2,080 junior college transfers who entered 319 junior colleges between 1934 and 1940. Of the 2,080 students studied, Eells found that 1,165 (56%) of the transfer students had either graduated or were still attending. Of this 1,165, 46% of them had obtained a higher grade point average than all

of the students in the study, 16% were below the overall grade point average, and 38 % were on par with the student population in terms of grade point average (Eells, 1943). In terms of degree achievement, Eells reported that 43 % of transfer students had graduated and 14 % were still in residence and on track to graduate (1943).

Like today, some of the early studies conducted that compared academic performance of junior college transfer students at four-year institutions provided conflicting information. Allen (1930) compared 330 transfer students from 26 junior colleges entering Baylor University. Allen found no difference between the cumulative grade point averages of transfer students and the native students at Baylor University.

On the other hand, Fichtenbaum (1941) studied 900 junior college transfers to the University of Texas between 1935 and 1938. He found that the cumulative grade point average of native students was greater than that of the transfer students after their junior years at the university. However, he did point out that the gap between the groups lessened during the senior year.

Martorana and Williams (1954) studied 251 junior college transfer students at the State College of Washington between 1947 and 1949. These students were grouped and matched with native students by gender, major subject area, high school size, age at time of entrance to college, ACT scores, and high school grade point averages. When, the performance was evaluated by groups, there was no significant difference between performance levels of the transfer students and that of the native students. In addition, when the groups were compared as a whole (251 transfers versus 251 native students) the transfer students did as well, or better than, the native students in terms of grade point

levels and degree completion. The researchers noted that in the areas of engineering and physical science the transfer students actually outperformed their native counterparts.

In the 50s and 60s, a major study was conducted by the Center for Study of Higher Education at the University of California, Berkeley. The study consisted of 16 four-year colleges or universities in eight different states. Each of these institutions was asked to provide information about the educational performance of both native (8,391) and transfer students (2,549) in the mid-1950s. The study found that transfer students earned cumulative grade point averages comparable to those of native students (Medsker, 1960).

At the same time, Klitzke (1961) studied 231 transfer students entering Colorado State University between 1953 and 1957. Klitzke matched community college students with native students based on lower division grade point average, equal numbers of both types of students by year, major, gender, and similar credits completed. Like many of the others, he found no significant differences between the grade point averages of transfer students and that of native students.

Similar results were reported by Hergenroeder in a 1967 study. Hergenroeder compared the baccalaureate degree attainment rates of transfer students with native students at six, public colleges and universities in Michigan. This study was designed to compare transfer students who had earned over 60 semester hours at a public two-year college with native students who were at junior status at that same time period. Two years later, the graduation rates were compared. Hergenroeder found that at four of the six four-year institutions, the native students graduation rate was 61.7% compared to 35.1% for the transfer students during that time period. Two of the four-year institutions

reported 88% graduation rate for the transfer students with only and 66% graduation rate for their own native students. No explanation for the difference was provided in the study.

Most studies that have been conducted appear to be regional in nature. However, in 1965, a large-scale nationwide study comparing transfer and native students was conducted by the Center for Study of Higher Education at the University of California, Berkeley, under the direction of Knoell and Medsker. The study included 7,243 two-year college students who transferred in the fall of 1960 as full time students. At the time of the study, 89% of them were entering a four-year college as a junior with upper division standing. Knoell and Medsker found that 45% of those studied graduated within two-years and 62% had graduated in three years. As of 1963, only 9% had not graduated.

A number of studies have been conducted where the researcher has reviewed prior studies in an effort to notice or reveal some type of trend or pattern. In one of these studies, Hills (1965) reviewed multiple studies involving community college transfer students and their performance at four-year institutions. Hill's primary findings showed that most studies reflected a "post-transfer drop" in grade point average for transfer students. However, these students ultimately recovered from the drop in 34 of the 38 studies. He also found that out of the 33 sets of data comparing the grades of transfer students to natives, 22 indicated native students performed better, seven indicated no difference in performance, and four indicated transfer students performed better than the native students.

Lee and Suslow (1966) studied 660 transfer students entering the University of California at Berkeley between 1961 and 1962. The researchers found that only 38% of

the transfer students completed their bachelor's degree in four semesters (two academic years) after transfer. Like many of the other studies, researchers also found that most transfer students experience a drop in grade point average their first semester, but by the end of the fourth semester they usually have raised it to a competitive level.

Langston (1971) conducted a study of 2,150 community college transfer students who entered the University of Iowa during the fall of 1967 and 1968. Langston found that 46 % of those entering in 1967 graduated within seven semesters and 9% were still attending. Of those who transferred in 1968, 25% graduated in five semesters and 28% were still attending.

In 1971, Elliott studied 325 community college transfer students who were then attending Pennsylvania State University. He found that 77% of the 325 students studied had graduated within two-years of transfer (Elliott, 1971). On the other hand, Gold (1981) studied 386 transfer students who transferred from Los Angeles City College to California State University at Los Angeles in the fall of 1977. Four years later, only 25% had graduated. He also noted that transfer students in the School of Business and Economics had grade point averages well below those of students in other schools.

Hildebrandt (1984) found that most transfer students in the Forestry Department at Iowa State University progressed slower in attaining their degrees and graduated with a greater number of credit hours. She concluded that this larger number of hours was in large part due to credit hours loss due to transfer.

In 1984, Doherty compared the rate of degree achievement of Piedmont Virginia Community College (PVCC) transfer students to students entering the University of Virginia as eligible freshmen. Differences were found between transfer student

graduation rates (73 %) and native student graduation rates (84%). In addition, the study compared PVCC graduates and non-graduates and found that 79% of the PVCC graduates eventually attained a degree from the University of Virginia within two years of transfer. At the same time, only 52% of the non-graduates attained a degree within two years of transfer (Doherty, 1984).

Nurkowski (1995) found that community college graduates were consistently more persistent than other student types. In her study, she found that “the institutional persistence rate was 55%, the native students persisted at only 49%, and the community college graduates persisted at 68%” (Nurkowski, 1995). The researcher went on to examine the significance of other variables such as age, gender and type of sending institution. She found that community college graduates were still the most persistent student group regardless of the variable examined. Finally, her study also examined transfer practices that affected student success. It was determined that transfer support services within academic schools correlated to transfer persistence and ultimately transfer student success.

Crawford (2003) compared the five year baccalaureate graduation rates of students who transferred from a two-year private institution, a two-year public institution, and native Idaho State University students. The study showed that the three cohort groups studied had near identical five-year baccalaureate attainment rates and time-to-degree rates. However, Crawford pointed out that two-year students who earned an associate degree prior to transfer to ISU received their baccalaureate degree faster than those who did not earn the associates degree.

Summary

The profile of today's college student is ever-changing. Gone are the days when a student started and completed his or her entire college experience at one institution.

Today's student is more mobile. The majority of students now take courses from two or more institutions as they work toward completion of their baccalaureate degrees. As students move from one institution to another, the need to simplify transfer procedures and streamline articulation of course credit is needed. Many institutions have worked diligently to make the transition easier for their students.

Over 39 states have either mandated or proposed statewide transfer agreements that help prevent students from losing course credits as they move from institution to institution. The type and nature of the agreements may vary depending on how the states set up their articulation programs. Maintaining transfer agreements requires considerable commitment. However, these agreements, for the most part, are useful because they make the transfer process "more transparent and allow it to operate more smoothly" (GAO, 2005, p. 11).

While more and more students face the transfer hurdle, with it comes certain concerns and worries. In a study conducted by the American Association of Community Colleges (AACC) and the American Association of State Colleges and Universities (AASCU), they found that students who had transferred ranked articulation, advising, and program requirements as their top three obstacles during the transfer process (AACC & AASCU, 2004).

Higher education trends continue to show an increase in community college enrollments. Since the early 1900's researchers have been trying to determine whether or

not transfer students are as successful as native students when it comes to completion of baccalaureate degrees. Most studies have been confined to regional areas or states. Very few national studies have been conducted. Many researchers have compared degree completion rates, cumulative grade point averages, scores on entrance exams, and time to graduation. Their findings on these issues have varied. Some studies have shown that transfer students perform as well or better than their native counterparts in terms of degree completion and grade point averages. On the other hand, other studies have shown that native students outperform transfer students in many of these areas. In terms of GPA comparison, often the transfer students see a decline in their GPA immediately after the transfer, but usually their grades improve over time to levels equal to that of the native students.

CHAPTER III

METHOD OF STUDY AND INSTRUMENTATION

Chapter I provided background information and a theoretical framework for this study, statement of the research problem, significance of the study, purpose of the study, research questions, hypothesis, and the limitations and assumptions of the study. Chapter II presented a review of research and literature related to the trends and growth of transfer students across the United States over the last thirty years, the increased need for transfer and articulation agreements to enhance and improve the transferability of coursework from one institution to another, the impact of articulation agreements on higher education, the barriers to transfer and completion of baccalaureate degrees, profiles of transfer and native students, and a chronological review of studies comparing the academic success of transfer and native students in other states.

Chapter III will discuss the methodology used in this study. The sources of data and the data collection procedures, privacy and confidentiality of student data collected, instrumentation, procedures for data analysis, and profiles of the institutions used in the study are presented.

Design of Study

This study was a retrospective study to identify differences in graduation status and time to graduation between transfer and native students to predict whether or not students were graduated or not graduated based on their age, gender, ethnicity, college

major, student type (transfer or native), cumulative grade point average (GPA) and number of terms enrolled.

The purpose of this study was to identify variables associated with the baccalaureate graduation status and number of terms enrolled for graduation of transfer and native students. Transfer students were those who have completed a portion (at least 30 semester hours) of their undergraduate program at an Alabama community college and who later transferred to a public four-year institution in Alabama to complete their baccalaureate degree. Native students were those who completed all of their baccalaureate degree at one four year-university. The dependent variable was graduation status – whether or not a student was graduated. Student demographic variables were as follows: (a) age, (b) gender, (c) ethnicity, (d) major, (e) type (transfer or native), (f) cumulative GPA, and (g) number of terms enrolled.

Sources of Data and Collection Procedures

The student data were obtained from the official student records of Troy University in Troy, Alabama. The researcher randomly selected academic records of two student groups: (1) native students who began their college career at Troy University, and (2) transfer students who began their college career at one of the primary feeder community colleges for Troy University (Enterprise-Ozark Community College, Wallace Dothan Community College, Lurleen B. Wallace Community College, and Chattahoochee Valley Community College) between 1998 and 2000, and who later transferred at least 30 semester hours of credit to Troy University. In addition, the researcher subdivided these two groups (transfer or native) by declared major in one of the following three discipline categories: business, education, or nursing. At the time of

the study these three disciplines comprised the largest student populations at Troy University. Business, education, and nursing were the most common majors pursued by students.

The sample data for this study included 50 native students in business, 50 transfer students in business, 50 native students in education, 50 transfer students in education, 50 native students in nursing, and 50 transfer students in nursing. The total number of students in the data set was 300. One-half of the students were native and one-half were transfer. The student records were randomly selected by the Records Office of Troy University.

The researcher obtained permission from the registrar of Troy University to conduct this study and access the student records. A copy of the letter requesting permission to conduct the study and access student records is included in Appendix A.

Privacy and Confidentiality of Student Data Collected

Appropriate steps were taken to insure the privacy and confidentiality of the data. The researcher obtained permission from the Institutional Research Board (IRB) of Auburn University to conduct this study. As required by the IRB, the researcher also obtained permission from Troy University to access the student data needed to conduct this study with the understanding that only the researcher had permission to view student records. A copy of the Auburn University IRB approval letter is included in Appendix B. The researcher did not share any personal or private information with others. The findings provided in the study were aggregated by group and not by individual. During the study, all data obtained using recording forms were kept in secure files on the campus of Troy University as prescribed by the Troy University registrar. A numbering system

was used to keep student information anonymous. After the study was completed, all data collected were destroyed.

Instrumentation

A researcher developed recording form was used to collect the student data. The form allowed the researcher to record the following information for each participant in the study: student identifier/observation number; birth year; age (birth year was used to calculate age at time of study); gender; ethnicity; major; cumulative grade point average; graduation status (yes or no); student type; number of terms enrolled in college; and transfer school for transfer students. A copy of the recording form is included in Appendix C.

Method of Procedure

Descriptive data such as frequency distributions, mean scores, maximum and minimum scores were analyzed from the data collected. The null hypothesis was tested using binary logistic regression analysis. Binary logistic regression is a classification procedure that may be used for prediction. This is an appropriate procedure for dichotomous data (graduated or not graduated) (Casella & Berger, 2002).

Procedure for Data Analysis

The Statistical Packet for the Social Sciences (SPSS), release 14.0, was used to address the three research questions in the study.

The first research question asked:

What are the demographic characteristics of students who transfer from community colleges to four-year institutions in Alabama and students who complete their

entire baccalaureate at one four-year institution in Alabama? This question was answered using descriptive statistics (Ary, Jacobs, & Rasavich, 2005).

The second research question asked:

What are the number of terms enrolled for students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama? This question was answered using descriptive statistics (Ary, Jacobs, & Rasavich, 2005).

The third research question asked:

To what extent is there a significant relationship between the predictor variables of age, gender, ethnicity, college major, cumulative GPA, student type (transfer or native), terms enrolled, and whether or not a person was graduated with a baccalaureate degree? This question was answered and the hypothesis was tested using binary logistic regression procedures.

Profiles of Institutions Used in this Study

Academic records of students who enrolled one or more of the following institutions were used: Troy University, Enterprise-Ozark Community College, Lurleen B. Wallace Community College, Wallace Dothan Community College, and Chattahoochee Valley Community College. The following sections present the scope and mission of the institutions, campus locations, and total number of students served in 2005.

Troy University

Troy University is a public institution comprised of a network of campuses throughout Alabama and worldwide. International in scope, Troy University provides a variety of educational programs at the undergraduate and graduate levels for a diverse student body in traditional, nontraditional and emerging electronic formats. Academic programs are supported by a variety of student services which promote the welfare of the individual student. The dedication of the Troy University faculty and staff promote discovery and exploration of knowledge and their application to life-long success through effective teaching, service, creative partnerships, scholarship and research (Retrieved from <http://www.troy.edu/mission.htm>, 2006).

The main campus of Troy University is located in the city of Troy, Alabama. Troy University also has state campuses in Montgomery, Dothan, and Phenix City, Alabama. In addition to campuses in Alabama, Troy University also has campuses in other states throughout the United States and in other countries around the world. In the Fall Semester of 2005, Troy University enrolled 14,957 in-state students (ACHE, 2005).

Enterprise-Ozark Community College

The mission of Enterprise-Ozark Community College (EOCC), a public two-year college located in rural Southeast Alabama, is to offer educational opportunities for personal growth and fulfillment, enhance the quality of life in the region, and promote economic growth. To accomplish this mission, Enterprise-Ozark Community College employs several institutional strategies, including, but not limited to, open access, diversity in curriculum, high quality

staff, and convenient locations (Retrieved from <http://www.eocc.edu/abouteocc/facts.htm>, 2006).

The two-primary campuses for EOCC are in Enterprise, Alabama and Ozark, Alabama. In addition, EOCC offers courses on the Fort Rucker Army Base in Fort Rucker, Alabama, and in downtown Mobile, Alabama. In the Fall Semester of 2005, EOCC had an enrollment of 1,732 students (ACHE, 2005).

Wallace Community College Dothan

“George C. Wallace Community College (WCCD), a comprehensive community college, seeks to provide accessible quality educational opportunities, promote economic growth, and enhance the quality of life of its constituents” (Retrieved from http://www.wcc.cc.al.us/about_wallace/about.htm, 2006). The main campus for Wallace Community College is in Dothan, Alabama. They also operate smaller campuses in Eufaula, Alabama and on the Fort Rucker Army Base in Fort Rucker, Alabama. In the Fall Semester of 2005, WCCD had an enrollment of 3,564 students (ACHE, 2005).

Lurlene B. Wallace Community College

Lurleen B. Wallace Community College (LBWCC) is a public, two-year institution in the Alabama College System under the governance of the Alabama State Board of Education. The College offers career-oriented certificates and associate degrees, as well as university transfer courses and associate degrees. In addition, the College provides specialized training for business and industry, non-credit and continuing education, adult education and community services to the residents of its service area. With fundamental principles affirming the value of education, the freedom of teaching and learning, and the worth, dignity and

personal development of each individual, the College provides an environment that emphasizes student success and achievement (Retrieved from

<http://www.lbwcc.edu/cms/Storage/Files/COLLEGE%20MISSION.pdf>, 2006).

The main campus of Lurleen B. Wallace Community College is located in Andalusia, Alabama. They also have branch campuses in Greenville and Opp, Alabama. In the Fall Semester of 2005, LBWCC had an enrollment of 1,475 students (ACHE, 2005).

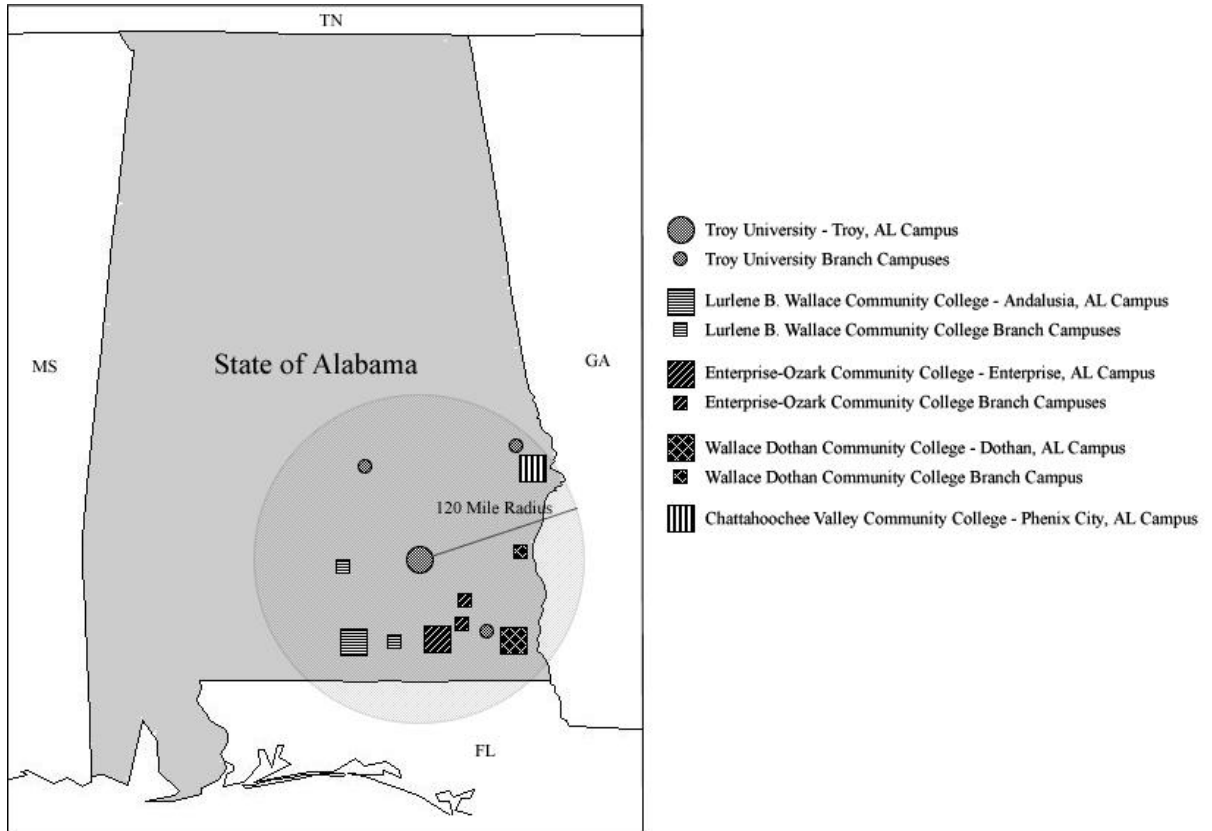
Chattahoochee Valley Community College

“The purpose of Chattahoochee Valley Community College (CVCC), a member of the Alabama College System, is to meet the higher education needs of the citizens of the Chattahoochee Valley and others who can benefit from the courses, programs, and services of the College” (Retrieved from <http://www.cvcc.cc.al.us/mission.htm>, 2006).

The main campus of Chattahoochee Valley Community College is located in Phenix City, Alabama. In the Fall Semester of 2005, CVCC had an enrollment of 2,034 students (ACHE, 2005).

Figure 2 depicts the locations and primary service areas for the institutions used in this study.

Figure 2. Map with locations of two-year and four-year institutions used in study.



Note: Map retrieved from <http://z.about.com/d/geography/1/0/7/J/al.jpg>. Researcher developed map points and map legend.

Summary

This chapter discussed the methodology used in the study. The sources of data and the data collection procedures, privacy and confidentiality of student data collected, instrumentation, procedures for data analysis, and profiles of the institutions used in the study were presented. The data analysis and results are presented in Chapter IV.

CHAPTER IV

DATA ANALYSIS AND RESULTS

Chapter I provided background information and a theoretical framework for this study, statement of the research problem, significance of the study, purpose of the study, research questions, hypothesis, and the limitations and assumptions of the study. Chapter II presented a review of research and literature related to the trends and growth of transfer students across the United States over the last thirty years, the increased need for transfer and articulation agreements to enhance and improve the transferability of coursework from one institution to another, the impact of articulation agreements on higher education, the barriers to transfer students as they work toward completion of baccalaureate degrees, profiles of transfer and native students, and a chronological review of studies comparing the academic success of transfer and native students in other states. Chapter III presented the methods and procedures used to identify and select subjects to be studied, general procedures of the data collection and recording, design of the study, and statistical treatment of the data. Chapter IV is concerned with the results of the data analysis.

Data Analysis

Descriptive data such as frequency distributions, mean scores, minimum and maximum scores were summarized from the data collected and used to answer research

questions one and two. Research question three was answered by testing the null hypothesis using binary logistic regression analysis.

Results for Research Question One

The first research question was:

What are the demographic characteristics of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama?

Demographic Characteristics for All Students

Demographic characteristics for all students (native and transfer) used in this study were summarized in terms of age, gender, ethnicity, college major, student type, grade point average, and graduation status. The mean age of all students in the sample was 27.01 years old. The median age was 26 years. The ages ranged from a minimum age of 22 years to a maximum of 50 years. The range was 28 years. Table 3 shows the mean, median, minimum and maximum age for all students as well as subgroups by student type (transfer or native) and college major (business, education, or nursing). When comparing the various student groups by age, the mean and median ages are very close for all groups studied. In terms of range, in all groups, except for business majors, the age range was also similar. For both the native and transfer business majors their minimum age values were consistent with other groups, but their maximum age value was much lower (between 27-32 years).

Table 3.

Mean, Median, Minimum, and Maximum Age by Student Type

Age	Mean	Median	Minimum	Maximum
All Students	27.01	26.00	22	50
Native Students	26.09	26.00	22	48
Transfer Students	27.93	26.00	22	50
Native Business Students	25.02	25.00	22	27
Transfer Business Students	25.94	26.00	22	32
Native Education Students	26.48	26.00	24	47
Transfer Education Students	29.72	28.50	22	47
Native Nursing Students	26.76	26.00	24	48
Transfer Nursing Students	28.14	26.00	23	50

One hundred and ninety-six (65%) of the 300 students were female and 104 (35%) were male. In all groups, except for business majors, female students outnumbered male students. There were 20% more male native business students (30) than female native business students (20). Male and female business transfer students were divided equally with 25 each. Table 4 shows the number and frequency for gender

by student type, including major subgroups.

Table 4.

Number and Frequency for Gender by Student Type

Gender	Females N (%)	Males N (%)
All Students (300)	196 (65%)	104 (35%)
Native Students (150)	92 (61.3%)	58 (38.7%)
Transfer Students (150)	104 (69.3%)	46 (30.7%)
Native Business Students (50)	20 (40%)	30 (60%)
Transfer Business Students (50)	25 (50%)	25 (50%)
Native Education Students (50)	45 (90%)	5 (10%)
Transfer Education Students (50)	39 (78%)	11 (22%)
Native Nursing Students (50)	27 (54%)	23 (46%)
Transfer Nursing Students (50)	40 (80%)	10 (20%)

The majority of the students were Caucasian. Of the 300 students, 226 (75.3%) were Caucasian and 74 (24.7%) were non-Caucasian. Table 5 shows the number and frequency for ethnicity by student type, including major subgroups. Native education students had the largest population of non-Caucasians with 36% (18/50). Transfer business students had the lowest percentage of non-Caucasians with only 8% (4/50).

Table 5.

Number and Frequency for Ethnicity by Student Type

Ethnicity	Caucasian N (%)	Non-Caucasian N (%)
All Students (300)	226 (75.3%)	74 (24.7%)
Native Students (150)	107 (71.3%)	43 (28.7%)
Transfer Students (150)	119 (79.3%)	31 (20.7%)
Native Business Students (50)	35 (70%)	15 (30%)
Transfer Business Students (50)	46 (92%)	4 (8%)
Native Education Students (50)	32 (64%)	18 (36%)
Transfer Education Students (50)	36 (72%)	14 (28%)
Native Nursing Students (50)	40 (80%)	10 (20%)
Transfer Nursing Students (50)	37 (74%)	13 (26%)

One-third (100) of the students were business majors, one-third (100) were education majors, and one-third (100) were nursing majors. Of the 300 students in the sample, one-half (50%) were classified as native students and one-half (50%) were classified as transfer students.

Each student's cumulative grade point average (GPA) was calculated on a four-point scale. The mean cumulative GPA for the entire sample was 2.753; the median GPA score was 2.828; GPA scores ranged from a minimum GPA of 0 to a maximum GPA of

4.0. The range was 4. Table 6 shows the mean, median, minimum and maximum values for all students as well as subgroups organized by student type. In all majors, except education, the transfer students obtained higher cumulative grade point averages than the native students in the same major. Transfer students as a group had a slightly higher mean GPA (2.816) than the native students (2.690).

Table 6.

Mean, Median, Minimum, and Maximum GPA by Student Type

GPA	Mean	Median	Minimum	Maximum
All Students	2.753	2.828	0.000	4.000
Native Students	2.690	2.655	0.636	4.000
Transfer Students	2.816	3.021	0.000	4.000
Native Business Students	2.555	2.490	1.630	4.000
Transfer Business Students	2.773	2.826	0.240	3.930
Native Education Students	2.746	2.848	1.200	4.000
Transfer Education Students	2.711	2.932	0.231	4.000
Native Nursing Students	2.767	2.772	0.636	4.000
Transfer Nursing Students	2.965	3.147	0.000	4.000

One-hundred and seventy-four of the 300 students (58%) had not been graduated at the time of the study, while 126 (42%) students had been graduated. Table 7 shows the frequency for graduation status by student type, including major subgroups. Overall, transfer students had been graduated in 44% of the cases studied while 40% of the native students had been graduated. Transfer education and transfer nursing students had a higher graduation percentage when compared to native students in the same programs. Only in business did the native students have a larger graduation percentage than transfer students.

Table 7.

Number and Frequency for Graduation Status by Student Type

Graduation Status	Graduated N (%)	Not Graduated N (%)
All Students (300)	126 (42%)	174 (58%)
Native Students (150)	60 (40%)	90 (60%)
Transfer Students (150)	66 (44%)	84 (56%)
Native Business Students (50)	31 (62%)	19 (38%)
Transfer Business Students (50)	23 (46%)	27 (54%)
Native Education Students (50)	9 (18%)	41 (82%)
Transfer Education Students (50)	15 (30%)	35 (70%)
Native Nursing Students (50)	20 (40%)	30 (60%)
Transfer Nursing Students (50)	28 (56%)	22 (44%)

Demographic Characteristics for All Native Students

Demographic characteristics for native students in this study were summarized in terms of age, gender, ethnicity, college major, student type, grade point average, and graduation status. The total number of native students used in this study was 150. The mean age of the native students was 26.09 years. The median age was 26 years. The ages ranged from a minimum age of 22 years to a maximum 48 years. The range was 26 years. Ninety-two (61.3%) of the 150 native students were female and 58 (38.7%) were male. The majority of the native students were Caucasian. Of the 150 native students, 107 (71.3%) were Caucasian and 43 (28.7%) were non-Caucasian. One-third (50) of the native students were business majors, one-third (50) were education majors, and one-third (50) were nursing majors. Grade point average (GPA) for the native students was calculated on a four-point scale. The mean GPA for the native students was 2.690. The median GPA score was 2.655. GPA scores ranged from a minimum GPA of .636 to a maximum GPA of 4.0. The GPA range was 3.364. Ninety of the 150 native students (60%) had not been graduated, while 60 (40%) students had been graduated. Table 8 presents descriptive data for all native students.

Table 8.

Summary of Descriptive Data for Native Students.

Variable	All Native Students (150)	Native Business Students (50)	Native Education Students (50)	Native Nursing Students (50)
<u>Age</u>				
Mean	26.09	25.02	26.48	26.76
Median	26.00	25.00	26.00	26.00
Minimum	22	22	24	24
Maximum	48	27	47	48
<u>Gender – N (%)</u>				
Female	92 (61.3%)	20 (40%)	45 (90%)	27 (54%)
Male	58 (38.7%)	30 (60%)	5 (10%)	23 (46%)
<u>Ethnicity – N (%)</u>				
Caucasian	107 (71.3%)	35 (70%)	32 (64%)	40 (80%)
Non-Caucasian	43 (28.7%)	15 (30%)	18 (36%)	10 (20%)

(table continues)

Table 8. *(continued)*

Variable	All Native Students (150)	Native Business Students (50)	Native Education Students (50)	Native Nursing Students (50)
<u>Grade Point Average</u>				
Mean	2.690	2.555	2.746	2.767
Median	2.655	2.490	2.848	2.772
Minimum	0.636	1.630	1.200	0.636
Maximum	4.000	4.000	4.000	4.000
<u>Graduation Status – N (%)</u>				
Graduated	60 (40%)	31 (62%)	9 (18%)	20 (40%)
Not Graduated	90 (60%)	19 (38%)	41 (82%)	30 (60%)

Demographic Characteristics for Native Business Students

Demographic characteristics for native business students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of native business students used in this study was 50. The mean age of the native business students was 25.02 years. The median age was 25 years. The ages ranged from a minimum age of 22 years to a maximum age of 27 years. The age range was 5 years. In terms of gender, 20 (40%) of the 50 native business

students were female and 30 (60%) were male. The majority of the native business students were Caucasian. Of the 50 native business students, 35 (70%) were Caucasian and 15 (30%) were non-Caucasian. Grade point average (GPA) for the native business students was calculated on a four-point scale. The mean GPA for the native business students was 2.555. The median GPA score was 2.490. GPA scores ranged from a minimum GPA of 1.63 to a maximum GPA of 4.0. The GPA range was 3.37. Nineteen of the 50 native business students (38%) had not been graduated, while 31 (62%) students had been graduated.

Demographic Characteristics for Native Education Students

Demographic characteristics for native education students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of native education students used in this study was 50. The mean age of the native education students at the time the sample was taken was 26.48 years. The median age was 26 years. The ages ranged from a minimum age of 24 years to a maximum age of 47 years. The age range was 23 years. In terms of gender, 45 (90%) of the 50 native education students were female and 5 (10%) were male. The majority of the native education students were Caucasian. Of the 50 native education students, 32 (64%) were Caucasian and 18 (36%) were non-Caucasian. Grade point average (GPA) for the native education students was calculated on a four-point scale. The mean GPA for the native education students was 2.746. The median GPA score was 2.848. The GPA scores ranged from a minimum GPA of 1.20 to a maximum GPA of 4.0. The GPA range was 2.8. Forty-one of the 50 native education students (82%) had not been graduated, while 9 (18%) students had been graduated.

Demographic Characteristics for Native Nursing Students

Demographic characteristics for native nursing students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of native nursing students used in this study was 50. The mean age of the native nursing students at the time the sample was taken was 26.76 years. The median age was 26 years. The ages ranged from a minimum age of 24 years to a maximum age of 48 years. The age range was 24 years. In terms of gender, 27 (54%) of the 50 native nursing students were female and 23 (46%) were male. The majority of the native nursing students were Caucasian. Of the 50 native nursing students, 40 (80%) were Caucasian and 10 (20%) were non-Caucasian. Grade point average (GPA) for the native nursing students was calculated on a four-point scale. The mean GPA for the native nursing students was 2.767; the median GPA score was 2.772; and the GPA scores ranged from a minimum GPA of .636 to a maximum GPA of 4.0. The range was 3.364. Thirty of the 50 native nursing students (60%) had not been graduated, while 20 (40%) students had been graduated.

Demographic Characteristics for All Transfer Students

Demographic characteristics for transfer students used in the study were summarized in terms of age, gender, ethnicity, college major, student type, grade point average, and graduation status. The total number of transfer students used in this study was 150. The mean age of the transfer students at the time the sample was taken was 27.93 years. The median age was 26 years. The ages ranged from a minimum age of 22 years to a maximum age 50 years. The age range was 28 years. One-hundred and four (69.3%) of the 150 transfer students were female and 46 (30.7%) were male. The

majority of the transfer students were Caucasian. Of the 150 transfer students, 119 (79.3%) were Caucasian and 31 (20.7%) were non-Caucasian. One-third (50) of the transfer students were business majors, one-third (50) were education majors, and one-third (50) were nursing majors. Grade point average (GPA) for the transfer students was calculated on a four-point scale. The mean GPA for the transfer students was 2.816. The median GPA score was 3.021. GPA scores ranged from a minimum GPA of 0 to a maximum GPA of 4.0. The GPA range was 4. Eighty-four of the 150 transfer students (56%) had not been graduated, while 66 (44%) students had been graduated. Table 9 presents the descriptive data for all transfer students.

Table 9.

Summary of Descriptive Data for Transfer Students.

Variable	All Transfer Students (150)	Transfer Business Students (50)	Transfer Education Students (50)	Transfer Nursing Students (50)
<u>Age</u>				
Mean	27.93	25.94	29.72	28.14
Median	26.00	26.00	28.50	26.00
Minimum	22	22	22	23
Maximum	50	32	47	50

(table continues)

Table 9. *(continued)*

Variable	All Transfer Students (150)	Transfer Business Students (50)	Transfer Education Students (50)	Transfer Nursing Students (50)
<u>Gender</u> – N (%)				
Female	104 (69.3%)	25 (50%)	39 (78%)	40 (80%)
Mmale	46 (30.7%)	25 (50%)	11 (22%)	10 (20%)
<u>Ethnicity</u> – N (%)				
Caucasian	119 (79.3%)	46 (92%)	36 (72%)	37 (74%)
Non-Caucasian	31 (20.7%)	4 (8%)	14 (28%)	13 (26%)
<u>Grade Point Average</u>				
Mean	2.816	2.773	2.711	2.965
Median	3.021	2.826	2.932	3.147
Minimum	0.000	0.240	0.231	0.000
Maximum	4.000	4.000	4.000	4.000
<u>Graduation Status</u> – N (%)				
Graduated	66 (44%)	23 (46%)	15 (30%)	28 (56%)
Not Graduated	84 (56%)	27 (54%)	35 (70%)	22 (44%)

Demographic Characteristics for Transfer Business Students

Demographic characteristics for transfer business students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of transfer business students used in this study was 50. The mean age of the transfer business students was 25.94 years. The median age was 26 years. The ages ranged from a minimum age of 22 years to a maximum age of 32 years. The age range was 10 years. In terms of gender, 25 (50%) of the 50 transfer business students were female and 25 (50%) were male. The majority of the transfer business students were Caucasian. Of the 50 transfer business students, 46 (92%) were Caucasian and 4 (8%) were non-Caucasian. Grade point average (GPA) for the transfer business students was calculated on a four-point scale. The mean GPA for the transfer business students was 2.773. The median GPA score was 2.826. GPA scores ranged from a minimum GPA of .240 to a maximum GPA of 3.93. The GPA range was 3.685. Twenty-seven of the 50 transfer business students (54%) had not been graduated, while 23 (46%) students had been graduated.

Demographic Characteristics for Transfer Education Students

Demographic characteristics for transfer education students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of transfer education students used in this study was 50. The mean age of the transfer education students at the time the sample was taken was 29.72 years. The median age was 28.50 years. The ages ranged from a minimum age of 22 years to a maximum age of 47 years. The age range was 25 years. In terms of gender, 39 (78%) of the 50 transfer education students were female and 11 (22%) were male.

The majority of the transfer education students were Caucasian. Of the 50 transfer education students, 36 (72%) were Caucasian and 14 (28%) were non-Caucasian. Grade point average (GPA) for the transfer education students was calculated on a four-point scale. The mean GPA for the transfer education students was 2.711. The median GPA score was 2.932. GPA scores ranged from a minimum GPA of .231 to a maximum GPA of 4.0. The GPA range was 3.769. Thirty-five of the 50 transfer education students (70%) had not been graduated, while 15 (30%) students had been graduated.

Demographic Characteristics for Transfer Nursing Students

Demographic characteristics for transfer nursing students used in the study were summarized in terms of age, gender, ethnicity, student type, grade point average, and graduation status. The total number of transfer nursing students used in this study was 50. The mean age of the transfer nursing students at the time the sample was taken was 28.14 years. The median age was 26 years. The ages ranged from a minimum age of 23 years to a maximum age of 50 years. The age range was 27 years. In terms of gender, 40 (80%) of the 50 transfer nursing students were female and 10 (20%) were male. The majority of the transfer nursing students were Caucasian. Of the 50 transfer nursing students, 37 (74%) were Caucasian and 13 (26%) were non-Caucasian. Grade point average (GPA) for the transfer nursing students was calculated on a four-point scale. The mean GPA for the transfer nursing students was 2.965. The median GPA score was 3.147. GPA scores ranged from a minimum GPA of 0 to a maximum GPA of 4.0. The GPA range was 4. Twenty-two of the 50 transfer nursing students (44%) had not been graduated, while 28 (56%) students had been graduated.

Results for Research Question Two

The second research question was:

What are the number of terms enrolled for students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama?

Table 10 displays the mean, median, minimum, and maximum values by student type for terms enrolled. The mean number of terms enrolled for all students were 12.31. The mean terms enrolled for native students were 10.85. The mean terms enrolled for transfer students was 13.78. All of the native groups (business, education, and nursing) enrolled in fewer terms than did the transfer students in those majors. In business, native students enrolled an average of 11.06 terms while the transfer students averaged 13.58 terms. In education, native students enrolled an average of 11.08 terms while the transfer students averaged 13.58 terms. In nursing, native students enrolled an average of 10.04 terms while the transfer students averaged 14.18 terms. Transfer students, while obtaining higher grade point averages and graduating more often, also enrolled in more terms than the native students.

Table 10.

Mean, Median, Minimum, and Maximum Number of Terms Enrolled by Student Type

Terms Enrolled	Mean	Median	Minimum	Maximum
All Students	12.31	13	1	42
Native Students	10.85	12	1	20
Transfer Students	13.78	13	3	42
Native Business Students	11.06	12	2	18
Transfer Business Students	13.58	13	4	42
Native Education Students	11.08	12	1	20
Transfer Education Students	13.58	13	4	26
Native Nursing Students	10.04	11	1	18
Transfer Nursing Students	14.18	14	3	29

Results for Research Question Three

The third research question was:

To what extent is there a significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (transfer or native), cumulative grade point average, terms enrolled, and whether or not a person was graduated with a baccalaureate degree?

The following null hypothesis was formulated to answer the third research question:

Ho: There is no statistically significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (native or transfer), cumulative grade point average, terms enrolled, and whether or not a person was graduated with a baccalaureate degree. Binary logistic regression procedures were used to test the null hypothesis and to construct a model to predict graduation status (graduated or not graduated). As stated earlier, 300 individual cases were used. The independent variables were age, gender, ethnicity, college major, grade point average, student type, and terms enrolled. The dependent variable was whether or not a student was graduated. Without knowing anything about the independent variables and looking only at whether or not a student was graduated, the logistic regression model predicted 100% of those who graduated, but only 58% of those who were not graduated. The efficacy of this model was not acceptable. However, this model provided a baseline by which the researcher could evaluate other models.

Next, all the individual variables were entered simultaneously. The chi-square statistic was computed to test the null hypothesis that the coefficients for all of the variables in the model were zero. The null hypothesis was rejected at the $p < .000$ level. Consequently, the set of predictor variables improved the prediction.

The Nagelkerke pseudo R^2 value (.499) was used to ascertain the amount of variance explained by the model. The .499 value indicates that the independent variables explained almost half of the amount of variance.

The chi-square goodness-of-fit statistic was calculated using the Hosmer and Lemeshow Test to divide the cases into ten approximately equal sized groups and compare the number of observed observations to the expected number of observations in each category of the dependent variable. The goodness-of-fit statistic was 4.969 with a significance of .761. After comparing the observed and expected events in the context of testing goodness-of-fit, the non-significant probability indicated that the model was a good fit. The Contingency Table for the Hosmer and Lemeshow Test is presented in Table 11.

Table 11.

Contingency Table for Hosmer and Lemeshow Test

Step 1	<u>Graduated = no</u>		<u>Graduated = yes</u>		<u>Total</u>
	<u>Observed</u>	<u>Expected</u>	<u>Observed</u>	<u>Expected</u>	
1	30	29.729	0	.271	30
2	29	28.654	1	1.346	30
3	29	26.699	1	3.301	30
4	21	23.639	9	6.361	30
5	19	19.185	11	10.815	30
6	17	15.904	13	14.096	30
7	10	12.680	20	17.320	30
8	10	8.917	20	21.083	30
9	6	6.018	24	23.982	30
10	3	2.575	27	27.425	30

Table 12 provides information on how well the model performed when all the variables were accounted for. As shown in the table, the overall predictive accuracy is 78.7%. The model does much better for not graduated, as the model correctly predicted 142/174, or 81.6% of these cases. It does a lesser job for predicting whether or not a person was graduated, 94/126, or 74.6%. In school practice, interest would most likely be on those not graduated, so the current model would certainly be of interest and one could say this current model is meaningful in the sense that it would be acceptable. In this case, there is correspondence between statistical fit of the model from likelihood statistics and the predictive ability of the model. However, finding a significant model does not necessarily mean having high predictability, but in this case, the significance model has high predictability. The accuracy of the current model (78.7%) is a great improvement over the original model.

Table 12.

Contingency Table for Model Predictive Accuracy

		<u>Predicted</u>			<u>Percentage Correct</u>
		<u>Graduated</u>			
Step 1	<u>Observed</u>	<u>no</u>	<u>yes</u>		
		<u>graduated</u>	<u>no</u> 142	<u>yes</u> 32	
		<u>yes</u> 32	<u>yes</u> 94		74.6
	<u>Overall Percentage</u>				78.7

Note. The cut value is .500

Considering only the distribution of the dependent variable (graduated/not graduated), if one predicted that all cases fall into the category of graduated, the prediction would be correct 174/300 or 58% of the time; the improvement to 78.7% with this current model seems particularly noteworthy.

Significant values for the predictor variables (age, gender, ethnicity, college major, grade point average, student type, and terms enrolled) were calculated using the Wald statistic, which is distributed as a chi-square statistic.

The following variables were statistically significant predictors ($p < .05$) for graduation status: all three college majors [nursing ($p = .000$), business ($p = .000$), and education ($p = .008$)] were statistically significant. Grade point average was statistically significant ($p = .000$). The higher the grade point average, the more frequently students were graduated. Student type (transfer/native) was statistically significant ($p = .024$). Transfer students in education and nursing were graduated more often than native students. Business native students were graduated more often than business transfer students. Terms enrolled was statistically significant ($p = .000$). The more terms students were enrolled the more often students were graduated. The following variables were not statistically significant predictors ($p > .05$) of graduation status: age ($p = .643$), gender ($p = .063$), and ethnicity ($p = .885$). Table 13 displays the variables used in the equation and their level of significance.

Table 13.

Variables in the Equation

Variable	Wald	Sig.
age	.215	.643
gender	3.467	.063
ethnicity	.021	.885
major	32.585	.000
major (1)	6.972	.008
major (2)	14.976	.000
GPA	22.784	.000
student type	5.117	.024
terms enrolled	37.194	.000
graduated or not (constant)	35.500	.000

Note. Variable(s) entered on step 1: age, gender, ethnicity, college major, GPA, student type, terms enrolled.

Summary

This chapter discussed the results of the data analysis. Descriptive data that summarized the demographic characteristics of the students used in the study were presented. Students were more likely to be in their mid-twenties, female, and Caucasian. Transfer students had a slightly higher mean cumulative grade point average than the native students. In addition, the transfer students had been graduated at a slightly higher

rate than the native students. The chapter provided information on the number of terms enrolled for students who transferred from community colleges to four-year institutions in Alabama and students who completed their entire baccalaureate at one four-year institution in Alabama. While the transfer students had higher grade point averages and were graduated more often, native students were enrolled in fewer terms during their college experience. There was a statistically significant relationship between the predictor variables of college major, student type (transfer or native), cumulative GPA, and terms enrolled and whether or not a person was graduated with a baccalaureate degree. There was no statistically significant relationship between the predictor variables of age, gender, and ethnicity and whether or not a person was graduated with a baccalaureate degree. The model used in the study appeared to be an acceptable predictor of graduation status (78.7%). A summary of this study, conclusions, and recommendations are presented in Chapter V.

CHAPTER V

SUMMARY AND CONCLUSIONS

Chapter I provided background information and a theoretical framework for this study, statement of the research problem, significance of the study, purpose of the study, research questions, hypothesis, and the limitations and assumptions of the study. Chapter II presented a review of research and literature related to the trends and growth of transfer students across the United States over the last thirty years, the increased need for transfer and articulation agreements to enhance and improve the transferability of coursework from one institution to another, the impact of articulation agreements on higher education, the barriers to transfer students as they work toward completion of baccalaureate degrees, profiles of transfer and native students, and a chronological review of studies comparing the academic success of transfer and native students in states other than Alabama. Chapter III presented the methods and procedures used to identify and select subjects to be studied, general procedure of the data collection and recording, design of the study, and statistical treatment of the data. Chapter IV presented the results of the data analysis.

This chapter will present a summary of the findings of this study, implications for further research, and recommendations for practical applications.

Overview of the Study

Today's college student is much more mobile than students who attended college in past decades. A student's final transcript often includes credit earned at different colleges and universities. As a result, the transfer student population is on the rise. Institutions should now evaluate transfer credit and graduate transfer students in a timely manner. To ease the transfer process, many states have implemented statewide transfer articulation programs. Alabama is one of these states. In 1994, the State of Alabama approved legislation (ACT 94-202) that created a statewide articulation committee called the Alabama Articulation and General Studies Committee (AGSC). This legislation granted the AGSC the power to create and maintain a statewide articulation program. Through this program, all public institutions of higher education in the state must accept AGSC approved transfer coursework and apply the transfer credit toward four-year degree requirements. While much has been done to improve the transfer process, higher education administrators and faculty in various disciplines have questioned the academic quality of those transfer students who transfer to their institutions and are awarded degree credit as prescribed by the AGSC. Some of the most common questions revolve around graduation success, grade point averages, and time to degree.

The focus of this study was the lack of information related to the variables associated with graduation status (graduated/not graduated) and total terms enrolled of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate program at one institution. In this study, transfer student success was measured comparing native and local transfer students

who attended Troy University (a regional university in southeast Alabama). In addition, this study included various demographic variables such as age, gender, ethnicity, college major, cumulative grade point average, graduation status, and terms enrolled.

Data for the study were randomly collected by the researcher. The researcher designed a data collection form to record all data used in the study. A copy of the recording form is displayed in Appendix C. Of the 300 students used in the study, one-half were native students at Troy University and one-half were transfer students who had transferred to Troy University from one of the following feeder community colleges: Enterprise-Ozark Community College, Wallace Dothan Community College, Lurleen B. Wallace Community College, and Chattahoochee Valley Community College. Each of the transfer students started between 1998 and 2000 and earned at least 30 semester hours of credit prior to transferring to Troy University. The native Troy University students also began their college careers between 1998 and 2000. In addition, the students were divided equally by major. The study included 50 business native students and 50 business transfer students; 50 education native students and 50 education transfer students; and 50 nursing native students and 50 nursing transfer students. The data were collected during the summer of 2006 thus allowing all students six to eight years to have been graduated.

The significance of the study has both practical and theoretical application. In practical terms, understanding the graduation status and total terms enrolled for both native students and transfer students may identify areas in which college and university administrators can improve in an effort to increase success among both student types. In addition, knowing which demographic variables aid in predicting graduation status may

also provide insight and information that can be used to enhance both native and transfer students' college experience. Theoretically, this study may add to the current body of knowledge on academic success of both native and transfer college students in the United States.

Summary of the Results

The study sought to answer the following research questions: (1) What are the demographic characteristics of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama? (2) What are the number of terms enrolled for students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama? (3) To what extent, is there a significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (transfer or native), cumulative grade point average, and whether or not a person was graduated with a baccalaureate degree?

Question one addressed the demographic characteristics of students who transfer from community colleges to four-year institutions in Alabama and students who complete their entire baccalaureate at one four-year institution in Alabama. The mean age of all students at the time of this study was 27.01, and the median age was 26. Transfer students were slightly older (mean age = 27.93) than the native students (mean age = 26.09) used in the study. The majority of all students used in the study were females (65%). Of the 150 native students 61.3% were females and 38.7% were males. Of the 150 transfer students 69.3% were females while 30.7% were males. Male students (55) out numbered female students (45) in the business program. Seventy-five percent of the

students were Caucasian and 24% were non-Caucasian. In all subgroups, Caucasian students out numbered non-Caucasian at least two to one. The mean grade point average (GPA) for all students was 2.753 and the median GPA was 2.828. Overall transfer students had obtained a slightly higher cumulative mean GPA (2.816) than did the native students (2.690). Transfer students in business and nursing also had slightly higher grade point averages than the native students in the same majors. In education, the mean GPA for native students was slightly higher than the mean GPA for transfer students. Only 42% of all students had been graduated, and 58% had not been graduated. Forty percent of native students had been graduated compared to 44% of transfer students who had been graduated. Sixty-two percent of the business native students had been graduated compared to 46% of the transfer students. Eighteen percent of the native education students had been graduated compared to 30% of the transfer students. Forty-percent of the native nursing students had been graduated compared to 56% of the transfer students.

Question two addressed the number of terms enrolled for students who transferred from community colleges to a four-year institution in Alabama and students who completed their entire baccalaureate at the same four-year institution in Alabama. Transfer students, on average, enrolled in more terms than the native students. In addition, transfer students obtained higher grade point averages and were graduated more often than native students. The mean terms enrolled for the transfer students were 12.31. The mean terms enrolled for the native students were 10.85. Transfer business and education majors enrolled in at least two more terms, on average, than did the native students. Transfer nursing majors enrolled in at least four more terms, on average, than the native students.

The third research question investigated whether or not there is a significant relationship between the predictor variables of age, gender, ethnicity, college major, student type (transfer or native), cumulative grade point average, and whether or not a person was graduated with a baccalaureate degree. Results of the logistic regression procedure indicated a statistically significant relationship for the predictor variables of college major, student type (transfer or native), cumulative GPA, and terms enrolled and whether or not a person was graduated with a baccalaureate degree. No statistically significant relationship was found for the predictor variables of age, gender, and ethnicity and whether or not a person was graduated with a baccalaureate degree. The model used in the study was an adequate predictor of graduation status (78.7%).

Conclusions

To the extent that the data collected for this study were valid and reliable and the assumptions of the study were appropriate and correct, the following conclusions may be made. Based on the results of this study, it may be concluded that there were slight differences between transfer students and native students. Overall, transfer students obtained slightly higher grade point averages and were graduated more often than the native students. Native students, on average, enrolled fewer terms and appeared to complete their college work faster than the transfer students. College major (business and education), student type (transfer or native), cumulative grade point average, and number of terms enrolled were significant predictors of graduation status (graduated or not graduated) for all students. At the same time, age, gender, and ethnicity were not significant in predicting graduation status.

Recommendations

The research for this study focused on the graduation status and terms enrolled of native and transfer students in Southeast Alabama. While the study focused only on native and transfer students who attended Troy University between 1998 and 2006, the study was designed so that it could be replicated at other universities. The variables used in the logistic regression model were age, gender, ethnicity, college major, cumulative grade point average, graduation status, and terms enrolled. It might be useful to include college entrance exam scores, cumulative high school grade point average, marital status, number of children, whether or not the student's parents were graduated from college, whether or not a student had a disability, and whether or not a student received financial aid during college to determine if they are significant predictors of academic success (graduated or not graduated).

While the study showed that transfer students as a group were graduated more often and obtained higher cumulative grade point averages during college, they also enrolled, on average, two more terms than did the native students. A study to determine the possible factors that lead to this longer enrollment period might be informative and useful to higher education administrators as they work to improve the college experience for their students and produce quality graduates of their institutions. Similar studies may be useful for enrollment management administrators in analyzing and implementing new policies aimed at increasing the enrollments of both native and transfer students. While Troy University and community colleges used in this study are non-profit organizations, all of them are ultimately interested in increasing revenue through increased student enrollment at their respective institutions.

This study compared the graduation status and terms enrolled of native and transfer students who majored in business, education, and nursing. A study using different college majors may be useful to see if similar results occur. Focusing on specific concentration areas within a selected discipline might also provide interesting data to determine how students compare within that discipline area. This could be useful for college deans, department heads, and faculty members as they attempt to analyze and improve the number of students who graduate in their particular discipline areas from their respective institutions.

Of the 300 students used in this study, only 126 (42%) of them had been graduated at the time the data were collected. The study allowed a six to eight year period (1998 through 2006) for students to complete a four-year bachelor's degree. Other Universities may want to conduct a study to determine the factors that possibly prevent or hinder a student from completing their program in a shorter time period.

The study showed that the transfer students attained a slightly higher overall cumulative grade point average than did the native students. More useful information might be gained if the grade point averages of the transfer students were analyzed prior to transfer. A comparison of the transfer students grade point average after their first year of school (approximately 30 semester hours) compared to the grade point averages of the university students after they too have completed 30 semester hours of course work may be useful in explaining the overall difference in cumulative grade point averages.

This study analyzed at each independent variable separately. Future research in this area may want to follow-up with cross-tabulation to see if any relationship exists

between the variables. This may help by showing if and how the variables may be related and impact one another.

As more and more students turn to distance education, a similar study to determine the graduation status and terms enrolled of native and transfer students who complete a large percentage of their college work using online instruction may also be helpful. Determinations could be made to see if there are differences in graduation status and terms enrolled for students who choose to take courses through various distance education platforms that are now widely available throughout higher educational institutions.

REFERENCES

- AGSC Definitions (1997). Retrived September 16, 2006 from <http://stars.troy.edu/agsc/defs.htm>.
- Alabama Articulation & General Studies Committee (1997, November 14, 1997). *Definitions of native, transfer, transient student, and concurrent enrollment adopted by the Articulation and General Studies Committee on November 14, 1997*. Retrieved July 6, 2004, from <http://stars.troy.edu/agsc/defs.htm>.
- Alabama Commission on Higher Education - ACHE (2005). Institutional student profiles, Fall 2005. Retrived July 5, 2006 from <http://www.ache.state.al.us/Profiles>.
- Alabama State Legislature (1994, March). *Alabama Legislation Act 94-202* Retrieved 8/29/05 from AGSC & STARS Website: <http://stars.troy.edu/agsc/legislation.htm>.
- Alabama Legislative Act 94-202, (1994) Section e.
- Allen, W. S. (1930). University success of junior college graduates. *Junior College Journal, 1*, 147-148.
- American Association of Community Colleges. (2000). *National profile of community colleges: Trends & statistics* (3rd ed.). Washington, DC: Author
- American Association of Community Colleges & American Association of State Colleges and Universities. (2002). Improving access to the baccalaureate. Retrieved 8/29/05 from http://www.pathtocollege.org/pdf/Lumina_Rpt_AACC.pdf.

- Arizona State University Official Website (2006). *Academic Transfer Articulation*.
Retrieved September 16, 2006 from <http://www.asu.edu/provost/articulation>.
- Ary, D., Jacobs, L. C., & Rasavieh, A. (2005). *Introduction to Research*. Belmont, CA: Wadsworth - Thomson Learning.
- Bagnato, K. (2002). Back to the lab. *Community College Week*, 18, 6-8.
- Carnevale A. P., & Desrochers, D. M. (2003). *Standards for what? The economic roots of K-16 reform*. Princeton, NJ: Educational Testing Service.
- Casella, G. & Berger, R. L. (2002). *Statistical Inference* (2nd ed.). Duxbury Advanced Series. Pacific Grove, CA Wadsworth Group. Thomson Learning.
- Chattahoochee Valley Community College Official Website (2006). *Mission Statement*.
Retrieved September 16, 2006 from <http://www.cvcc.cc.al.us/purpose.cfm>.
- Crawford, V. M. (2003). A comparison of the baccalaureate graduation rates of students who transferred from a two-year private institutions, a two-year public institution, and native Idaho State University students. (*Doctoral dissertation, Idaho State University, 2003*). Dissertation Abstracts International, UMI No. 3082997.
- Crump, D., O'Neal, M., & Wilds, P. (2002). *AGSC & STARS Evaluation Project Final Report* (AGSC & STARS). Retrieved July 6, 2004, from http://stars.troy.edu/agsc/AGSC-STARS_Evaluation_Project_Final_Report.pdf.
- Doherty, Frank J. (1984). *The academic performance of Piedmont Virginia Community College transfer students at the University of Virginia*. (Research Rep. No. 5-84). Charlottesville, Virginia: Piedmont Virginia Community College, Office of Institutional Research and Planning.

- Eells, W. C. (1943). *Associate's degree and graduation practices in junior colleges*. Washington, D.C.: American Association of Junior Colleges.
- Eells, W. C. (1927). *The junior college: Its organization and administration*. Palo Alto, Calif.: Stanford University Press.
- Elliott, E. S. (1972). The academic achievement of transfer students and the college comprehensive tests. *Journal of College Student Personnel*, 13, 266-269.
- Enterprise-Ozark Community College Official Website (2006). *Mission Statement*. Retrieved September 16, 2006 from <http://www.eocc.edu/adminoffices/registrar/catalogs/CollegeCatalog.pdf>.
- Fichtenbaum, M. (1941). Junior college graduates versus senior college juniors. *Journal of the American Association of College Registrars*, 16, 144-154.
- Giddings, W. G. (1985). A study of the performance, progress, and degree achievement of Iowa community college transfer students at Iowa's state universities (*Doctoral dissertation, Iowa State University, 1985*).
- Gold, B. K. (1981). *Persistence of fall 1977 transfers to CSULA: Second Report*. Los Angeles City College. ERIC ED 208 927.
- Grade Point Average. (n.d.). *Dictionary.com Unabridged (v 1.0.1)*. Retrieved September 16, 2006, from Dictionary.com website: [http://dictionary.reference.com/search?q=grade point average](http://dictionary.reference.com/search?q=grade+point+average)
- Hergenroeder, S. J. (1967). *A comparative study of academic performance of community college transfer students and native students in six public four-year colleges and universities of Michigan*. Unpublished doctoral dissertation, University of Michigan, Ann Arbor.

- Hildebrandt, R. E. (1984). *Transfer vs. nontransfer student progress and performance in a university forestry program*. Unpublished manuscript. Iowa State University, Forestry Department, Ames, Iowa.
- Hungar J. Y., & Lieberman, J. (2001). *The road to equality: Report on transfer for the Ford Foundation*. New York: The Ford Foundation.(ERIC No. ED455856).
- Integrated Postsecondary Education Data System (IPEDS). 2002). *Integrated Postsecondary Education Data System Fall enrollment survey, 2002*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
- Klitzke, L.L. (1961). Academic records of transfers in teacher training. *Junior College Journal, 31*, 255-257.
- Knoell, D.M., & Medsker, L.L. (1965). *From junior to senior college: A national study of the transfer student*. Washington D. C.: American Council on Education.
- Koos, L.V. (1924). *The junior college*. Research Publications of the University of Minnesota, Education Series, No. 5, Vol. I. Minneapolis: University of Minnesota.
- Koos, L. V. (1925). *The junior-college movement*. San Fransicsco: Ginn and Company.
- Langston, R. G. (1971). Iowa two-year college transfer students at the University of Iowa: Academic success and satisfaction. (Doctoral dissertation, University of Iowa, 1971). *Dissertation International, 32* (09) P4955.
- Lee. D., & Suslow, S. A. (1966). *Differential study of junior college transfer students at the University of California*. Berkeley, California: California University, Berkeley, Office of Institutional Research. ERIC ED 012 615.

Lurleen B. Wallace Community College Official Website (2006). *Mission Statement*.

Retrieved September 16, 2006 from

<http://www.lbwcc.edu/cms/Storage/Files/COLLEGE%20MISSION.pdf>.

Martorana, S.V., & Williams, L.L. (1954). Academic success of junior college transfers at the State College of Washington. *Junior College Journal*, 24, 402-415.

Medsker, L. (1960). *The junior college: Progress and prospect*. NY:McGraw-Hill.

National Center for Education Statistics. (1998). *Statistical analysis report June 1998: First-generation students; Undergraduates whose parents never enrolled in postsecondary education*. Washington, DC: Author.

National Postsecondary Student Aid Study (NPSAS). (2000). National Postsecondary Student Aid Study 1999-2000. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Nurkowski, L.C. (1995). Transfer student persistence and academic success (*Doctoral dissertation, Widener University, 1995*).

Raisman, N. (1990). Moving into the fifth generation. *Community College Review*, 18, 15-23.

Ramsey, F. & Schafer, D. (2002). *The statistical sleuth: A course in methods of data analysis* (2nd ed.) (2002) Duxbury, Thomson Learning, Inc. Pacific Grove, CA. p. 544.

Shabazz, M. (1995). Group seeks restructuring of higher education financing. *Community College Week*. 10.

Townsend, B. (2000). Rationals of community colleges for enrolling reverse transfer students: a second chance for whom? *Community College Journal of Research & Practice*, 24. 301-311.

Troy University Official Website (2006). *Mission Statement*. Retrived September 16, 2006 from <http://www.troy.edu/mission.html>.

United States Government Accountability Office. (2005). *Transfer students – postsecondary institutions could promote more consistent consideration of coursework by not basing determinations on accreditation*. (GAO Report to Congressional Requesters No. GAO-06-22). Washington, DC: U.S. Government Printing Office.

Wallace Community College Official Website (2006). *Mission Statement*. Retrived September 16, 2006 from http://www.wallace.edu/about_wallace/about.htm.

What is the AGSC? (2006). *What is the AGSC?* Retrieved 7/03/06, from http://stars.troyst.edu/agsc/what_agsc.htm.

What is STARS? (2006). *What is STARS?* Retrieved 7/03/06, from http://stars.troyst.edu/stars/what_stars.htm.

APPENDICIES

APPENDIX A

IRB APPROVAL LETTER FROM AUBURN UNIVERSITY

Auburn University

Auburn University, Alabama 36849



Office of Human Subjects Research
307 Sanford Hall

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

December 21, 2005

MEMORANDUM TO: Keith Sessions
Educational Foundations, Leadership and Technology

PROTOCOL TITLE: "Academic Success of Transfer Students and Native Students in Southeast Alabama"

IRB File: #05-231 EX 0511

APPROVAL DATE: November 21, 2005

EXPIRATION DATE: November 20, 2006

The referenced protocol was approved "Exempt" from further review under 45 CFR 46.101 (b)(4) by IRB procedure on November 21, 2005. You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you should anticipate a change in any of the procedures authorized in this protocol, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB File in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before November 20, 2006, you must submit a request for an extension of approval to the IRB no later than November 1, 2006. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to November 20, 2006, you must suspend the project immediately and contact the Office of Human Subjects Research for assistance.

A Final Report will be required to close your IRB project file.

If you have any questions concerning this Board action, please contact the Office of Human Subjects Research at 844-5966.

Sincerely,

A handwritten signature in cursive script, appearing to read "Niki L. Johnson".

Niki L. Johnson, JD, MBA, Director
Office of Human Subjects Research
Research Compliance Auburn University

cc: William Spencer
Marie Kraska

APPENDIX B
LETTER REQUESTING AND RECEIVING ACCESS TO
TROY UNIVERSITY STUDENT RECORDS

Auburn University

Auburn University, Alabama 36849-5221

Educational Foundations,
Leadership, and Technology
4036 Haley Center

Telephone: (334) 844-4460
FAX: (334) 844-3072

November 7, 2005

Mrs. Vickie Miles
Troy University Registrar
LL Adams Administration Building
Troy, AL 36082

Dear Mrs. Miles:

I am currently working on my doctoral research to complete the requirements set forth by Auburn University. I am interested in conducting a study of the graduation status (graduated/not graduated) of transfer students and native students who attend institutions of higher education in southeast Alabama. The purpose of the study will be to compare the baccalaureate graduation status of transfer students who have completed a portion (at least 30 semester hours) of their undergraduate program at an Alabama community college and who later transfer to a public four-year institution in Alabama to complete their baccalaureate degree and the baccalaureate graduation status of native students who completed all of their baccalaureate degree at Troy University.

Results of this study may provide useful information for counselors and administrators in guiding students to timely graduation. In addition, this study could prove useful as baseline data not only for Troy University, but also for other similar Universities in Alabama and the southeast.

I would like to obtain permission from Troy University to conduct this study using student data obtained from your official student records. To protect the privacy of students, I promise to do the following:

1. Protect student anonymity and privacy at all times
2. Use only student reference numbers provided by Troy University when recording individual student data protect student anonymity (do not use student names or social security numbers)
3. Report my findings by group only and not by individual
4. Use the attached recording form to record student data (This document is to be kept in secure files in my office on the campus of Troy University in Troy, Alabama.)
5. Keep all data recording forms in fire-proof safe in Troy University Records Office until study is complete
6. Destroy all hard copies of data collected after study is complete (shred all forms)
7. Share my findings with you and other administrators at Troy University if you so desire

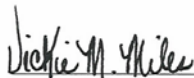
Your signature on this letter indicates your approval of me accessing the student files and recording the necessary data in order to conduct my study.

Thank you for your consideration. I look forward to hearing from you in the near future.

Sincerely,



Keith Sessions, Executive Director
Statewide Transfer & Articulation Reporting System



Vickie Miles, Registrar
Troy University



Date

A LAND-GRANT UNIVERSITY

APPENDIX C

RECORDING FORM USED TO COLLECT STUDENT DATA

APPENDIX D

LETTER OF PERMISSION TO RE-PRINT FIGURE 1

NOTE: The researcher e-mailed the United States Government Accountability Office (USGAO) to determine the appropriate individual to send a letter to requesting permission to re-print the pie chart that was printed in an October 2005 document published by their office. The following e-mail was sent back from their office stating that the researcher did not need permission from them to reprint the figure due to the fact that the USGAO documents are public and not protected by copyright laws.

Request for permission to reprint chart.

Subject: Request for permission to reprint chart.
From: "Bryon S Gordon" <GordonB@gao.gov>
Date: Tue, 10 Oct 2006 18:06:51 -0400
To: <ksessions@stars.troy.edu>

Kieth,

GAO documents are public documents and we do not maintain copyright protection. Consequently, you are free to reproduce the graphics of our report.

Bryon

Keith Sessions <ksessions@stars.troy.edu> 10/4/2006 10:17 AM >>>

Hi Ms. Ashby,

My name is Keith Sessions. I am a doctoral student at Auburn University in Alabama. I am working on my dissertation titled "ACADEMIC SUCCESS OF TRANSFER STUDENTS AND NATIVE STUDENTS IN SOUTHEAST ALABAMA." In writing my literature review, I would like to obtain permission to reprint the pie chart in Figure 1 on page 5 of the October 2005 USGAO Report titled "TRANSFER STUDENTS - Postsecondary Institutions Could Promote More Consistent Consideration of Coursework by Not Basing Determinations on Accreditation."

Who do I need to write to obtain permission to reprint this chart?

Thanks for any help you can provide.

Sincerely,
Keith
--

Keith Sessions
Executive Director AGSC/STARS
LL Adams Administration Building
Troy University
Troy, Alabama 36082

334-670-3690 (Office)
334-670-3695 (Fax)
334-372-2068 (Cell)
ksessions@stars.troy.edu <<mailto:ksessions@stars.troy.edu>>

1 of 1 10/11/2006 9:48 AM

APPENDIX E
LETTER OF PERMISSION TO RE-PRINT
TABLE 1 AND TABLE 2

Auburn University

Auburn University, Alabama 36849-5221

Educational Foundations,
Leadership, and Technology
4036 Haley Center

Telephone: (334) 844-4460
FAX: (334) 844-3072

October 4, 2006

Barbara Daniels
Office of Communications, AACC
One Dupont Circle NW
Suite 410
Washington, DC 20036-1176

Dear Ms. Daniels,

My name is Keith Sessions. I am a doctoral student at Auburn University in Alabama. I am working on my dissertation titled "ACADEMIC SUCCESS OF TRANSFER STUDENTS AND NATIVE STUDENTS IN SOUTHEAST ALABAMA." In writing my literature review, I would like to obtain permission to reprint/reproduce the following two tables:

1. **Table 1. Ranking of Obstacles by Four- and Two-Year Institutions (PAGE 2)**
American Association of Community Colleges & American Association of State Colleges and Universities. (2002). Improving access to the baccalaureate. Retrieved 8/29/05 from http://www.pathtocollege.org/pdf/Lumina_Rpt_AACC.pdf.

Obstacles	Rank Four-Year Institutions	Rank Two-Year Institutions
Articulation	1	2
Reliable Information/Advising	2	3
Program-Specific Transfer	3	3
General Education	4	4
AAS/Technical Education Transfer	5	5
Access/Distance Education	6	7
Cost/Financial Aid	7	6

Note. Data are from a research survey conducted by AACC and AASCU (2002). Available at <http://www.pathtocollege.org/pdf/RESEAR.pdf>

OTHER INFORMATION: Approximately 7 copies of my dissertation will be printed. The table above will be used in Chapter 2 of my dissertation (literature review). I will not be selling my dissertation.

PERMISSION TO REPRINT TABLE 1 GRANTED:

YES NO

Barbara Daniels
Signature of AACC Representative

11/2/06
Date

2. **Table 2. A Demographic Comparison of Students in Two- and Four-Year Institutions (PAGE 5)**
 American Association of Community Colleges & American Association of State Colleges and Universities. (2002). Improving access to the baccalaureate. Retrieved 8/29/05 from http://www.pathocollege.org/pdf/Lumina_Rpt_AACC.pdf.

Table 2. A Demographic Comparison of Students in Two- and Four-Year Institutions	
<p>Profile of Two-Year Student</p> <ul style="list-style-type: none"> The average community college student is 29 years old, attends college part time (fewer than 12 credit hours a semester), and holds down a full-time job. Sixty-three percent of the 11.3 million students who attend community colleges annually are enrolled part time, whereas only 37% attend full time (12+ credit hours a semester). Of those who do attend college full time, 30% also hold a full-time job. Fifty-eight percent of community college students are women; many have significant family responsibilities that are exacerbated by the difficulties of finding child care. Fifty-five percent of Latino and Native American undergraduates and 46% of all Black undergraduates attend a community college. 	<p>Profile of Four-Year Student</p> <ul style="list-style-type: none"> The average public four-year student begins post-secondary studies at age 21. Full-time students represent 78% of undergraduate enrollment at public four-year institutions. More than half of public four-year undergraduate students (55.9%) enroll full time and work part time. Students who work full time and enroll part time account for approximately 20% of public four-year undergraduates. Women account for 55% of public four-year undergraduate enrollments; many have significant family responsibilities that are exacerbated by the difficulties of finding child care. Public four-year institutions enroll 31.4% of all Black undergraduates; 35.1% of Latino undergraduates; 34.3% of Native American undergraduates; and 38.9% of Asian/Pacific Islander undergraduates.
<p><small>Note: Data on two-year students are from AACC (2000); data on four-year students are from IPEDS (2002) and NPSAS (2000).</small></p>	

OTHER INFORMATION: Approximately 7 copies of my dissertation will be printed. The table above will be used in Chapter 2 of my dissertation (literature review). I will not be selling my dissertation.

PERMISSION TO REPRINT TABLE 2 GRANTED:

YES NO

Barbara Daniels
 Signature of AACC Representative

11/2/06
 Date

Thank you for considering my request. I look forward to hearing from you in the near future.

Sincerely,

Keith Sessions
 Keith Sessions

Please send your response to:

Mr. Keith Sessions
 LL Adams Administration Bldg.
 Troy University
 Troy, AL 36082

ksessions@stars.troy.edu
 Phone: 334-670-3797
 Fax: 334-670-3695