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# The Relationship between Financial Aid Type and Academic Success in a Public Two-Year College in Georgia

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THE RELATIONSHIP BETWEEN FINANCIAL AID TYPE AND ACADEMIC SUCCESS IN  
A PUBLIC TWO-YEAR COLLEGE IN GEORGIA

by

DONALD D. AVERY

Under the Direction of James Green

ABSTRACT

The purpose of this study was to investigate whether there is a relationship between financial aid type and academic success in a public two-year institution in the state of Georgia. Financial assistance contributes significantly to higher education in the form of subsidy to the participants in higher education through student financial aid. Much of the research available on this topic is based on data provided by four-year institutions and research was not identified which investigates the aid type and potential relationship to academic success.

In an attempt to establish this relationship, the investigation considered grades earned in foundational coursework as determined by the researcher while in attendance at a higher educational institution and the type of financial assistance received by the student. Data existed that provided the basis for the historical study. Accordingly, the investigation utilized a quantitative approach with an ex post facto design. Specifically, the study compared course grades in specified courses among students who received financial assistance from the following sources of aid: 1) grants, 2) scholarships, 3) loans, and 4) students receiving no aid. Data for a five year period beginning with the fall of 2006 formed the basis for this study. Included in the data retrieval was information concerning financial aid type, course prefix, course number, grade, high school grade point average (GPA), earned family contribution (EFC), sex, and ethnicity. An analysis of covariance was employed to obtain research results. The study determined a statistically significant relationship existed between all model predictors (i.e., sex,

ethnicity, EFC, financial aid type, and high school GPA) and collegiate GPA at the .01 level of significance. Multiple comparison of mean differences in collegiate GPA's determined the following statistically significant comparisons at .01 level of significance: females outperformed males, Whites outperformed Blacks, "other" outperformed Black, "No Aid" outperformed Loans, HOPE outperformed Loans, HOPE outperformed Pell/Loans, Pell/HOPE outperformed Loans, recipients of all forms of aid outperformed Loans, Pell/HOPE outperformed Pell/Loans, and recipients of all forms of aid outperformed Pell/Loans.

INDEX WORDS:Financial aid, Academic success, Two-year colleges, Georgia, Retention, Progression

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## DEDICATION

I would like to take this opportunity to dedicate this dissertation to those individuals who have supported me throughout this process. To my wife, Stacie Avery, for her patience and support allowing me the opportunity to complete this process in the face of the overwhelming challenges of everyday life. To my children, Austin Proctor, Caleb Avery, and Jacob Avery who have too many times heard me say, “I need to work on my dissertation”. To my parents, Don and Darlene Avery, who have quietly encouraged me to push through and complete my dissertation. And to Dr. John Black, without whose initial encouragement I may have not taken this step to doctoral completion.

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## **CHAPTER I**

### **INTRODUCTION**

According to the U. S. Department of Education (2010), nearly 19 million individuals borrowed 90 billion dollars in 2010 for the purpose of pursuing a college education. The significance of this statement is in the realization of the number of individuals in this country who are pursuing a college education and the high cost of doing so. Earning a college education has many benefits. Baum (2007) stated the benefits of a collegiate education go well beyond the financial incentive to the individual seeking the degree. A collegiate education impacts society through increased civic involvement, lower crime and incarceration rates, and lower unemployment rates.

Financial assistance is available to qualified applicants in pursuit of higher education at the federal, the state, and the local level. The primary sources of federal aid available to students in Georgia at public two-year institutions are the Pell Grant and student loans (U.S. Department of Education, 2009). The state of Georgia provides the Helping Outstanding Pupils Educationally (HOPE) scholarship and grant programs (Georgia Student Finance Commission, 2010). Local sources typically come in the form of merit scholarships through private sources.

Higher education is being called upon to account for the financial resources which are being allocated to our post-secondary institutions for the purpose of higher educational attainment (Drummond, 2006). According to Tollefson (2009), academic success, particularly graduation rates, is a measure of the accountability factor for many policy makers. In order to gauge accountability in the higher educational practice, much research has been devoted to retention and progression issues (Mendoza, Mendez & Malcolm, 2009).

Current research does not investigate the potential relationship of aid type to academic success but primarily focuses on financial assistance enabling students to stay in school. Additionally, a majority of the research has been done at the four-year level and less specifically on higher educational institutions in the state of Georgia. This study will investigate this gap and will determine if there is a relationship between type of financial aid received and academic success at the foundational course level in the public two-year college in Georgia. Consideration will be given to other factors such as aptitude upon graduation from high school, socioeconomic status, sex, and ethnicity. Observed relationships will be identified between these factors and academic success.

### **Background**

Individuals are taking advantage of higher education opportunities in the United States at historical rates (U.S. Department of Commerce, 2009). As enrollment increases, so does the cost of higher education to the general public. Many individuals need financial assistance in order to enable them to pursue post-secondary education. Financial assistance is provided at the federal, the state, and the local levels in multiple forms for the pursuit of a college education. With this increase in participation and in financial support, much of it coming from the public sector, accountability has become a top priority. Justification for this investment is difficult at times to ascertain as the value of the post-secondary educational experience is difficult to quantify. Prior research on financial aid and higher education has been conducted primarily at the four-year level as it relates to the relationship of financial assistance to access, retention, and progression. This investigation will provide information to assess the history of research as it relates to higher education in general and to the two-year college environment in particular.

## **Two-year Colleges**

Cohen and Brawer (2003) pointed to the creation of the community college by a federal legislative act in the late 1800's as a major step in making higher education more accessible. The resultant shift was from classical liberal arts education to a more practical vocational track. This increase in higher educational interest and diversification of participant population mandated a change in the direction of higher education to one directed toward the primary business of the day, which was agriculture.

## **Trends in Two-year Colleges**

A report from the U.S. Department of Commerce (2009) stated that the percentage of 18 to 24 year olds who graduated with a high school diploma and went on to post-secondary education increased from 34% to 47% between the years 1967 and 2008. According to a report published by the University System of Georgia (2010), the enrollment at the 35 system schools has increased since 1968 from an enrollment of 76,231 to over 300,000 for the year of 2009. According to a report by College Board (2010), approximately 6.4 million students were enrolled in two-year colleges in the fall of 2007 with approximately 40% enrolled full-time. Community colleges enrolled 40% of all undergraduate students in the fall of 2007, with only 24% registered full-time.

## **Affordability of Two-year College Education**

According to Keller (2010), the federal government makes an investment in higher education by subsidizing the cost through the allocation of a portion of tax receipts. States share in the cost of higher education through appropriations attained from monies collected from taxpayers (Toutkoushian & Shafiq, 2010). The institutions account for the balance of the cost

through generated income in the form of fees from tuition, books, services and/or amenities. The cost of education to students is funded in large part through these financial assistance monies.

Two-year colleges have struggled financially but consistently have maintained a lower cost of attendance than the traditional four-year institution (College Board, 2010). Primarily this can be accounted for by considering scope, instruction, and services for the two-year institution (Seybert & Rossel, 2010). Two-year colleges offer fewer programs than four-year colleges so their scope is more narrowly defined. In addition, two-year colleges use a larger proportion of part-time instructors reducing the total cost of compensation through the elimination of benefits paid to the employee and ultimately reducing the cost of instruction. And finally, they typically offer fewer services in comparison to four-year institutions as they are not trying to be all things to all students.

### **Cost of Post-secondary Education in Two-year Colleges**

Casse and Manno (1998) reported that, historically, the cost of two-year education has been less than the cost per credit hour at the four-year institution. Seybert and Rossel (2010) studied cost drivers in higher education by comparing cost driver differences between two and four-year institutions. The authors gave credit to the lower per credit hour cost of two-year education to the significant use of part-time instructors as reducing the cost of instruction at the two-year college level. Much attention was given by the authors to the Delaware and Kansas studies. These studies investigated the cost of instruction at the four-year level and the two-year level, respectively, as a basis for their conclusions.

According to a published report by College Board (2010), the 2009-2010 year average cost of tuition and fees for attending a two-year institution was \$2,544 dollars, 7.3% higher than

the prior year. These costs are based on public education and the cost of students attending a school in their home state.

### **Financial Aid in Two-year Colleges**

Financial aid is intended to provide assistance to students enabling them to pursue post-secondary education (U.S. Department of Education, 2010). The primary purpose of financial aid is to act as a bridge to assist students and parents in filling the gap between what they are able to provide financially and the total cost of attendance. Need-based aid is determined by what a student can show they need as a bridge in their finances in order to attend college. Merit-based aid is offered to students who perform at a particular academic level. Loans are also provided to students at low interest rates, this funding source includes a restitution element in that loans must be repaid. The primary types of funding sources for Georgia's two-year college students are federal grants and loans, state scholarships, and private source scholarships. Grants and scholarships do not require repayment. Participation qualifications for these sources of financial assistance are merit-based or need-based.

According to a report published by the U.S. Department of Education (2010) on enrollment and financial aid, the percent participation rate from the 2000-2001 aid year to the 2007-2008 aid year increased from 70% to 75%. The number of participants has also increased by 150,000 first-time full-time students from 528,000 participants to over 671,000 participants in two-year colleges. Additionally, the federal government issued Pell Grant awards to more than 5.5 million students in the 2009-2010 aid year. The sum of the monies awarded to these individuals ranged from \$400 to over \$4,300, and the total award amount from Pell Grant for this aid year exceeded \$14.5 billion dollars. A report produced for the President of the United States on the status of financial assistance stated that for the 2009-2010 aid year there were more than

13 million borrowers of subsidized and unsubsidized loans (U. S. Department of Education, 2010). The total volume of these loans exceeded \$74 billion. The state of Georgia alone accounted for over \$630 million.

In the state of Georgia through lottery supported funding, the state has established a Helping Outstanding Pupils Educationally (HOPE) Scholarship program, which is available to students who achieve a certain level of academic performance during high school (Georgia Student Finance Commission, 2010). Through this program recipients will receive assistance to cover the cost of attendance and certain additional fees. The number of recipients has grown from 43,000 in 1993 to over 158,000 in 2010 (Georgia Student Finance Commission GaCollege411, 2010). During that same time period, the total volume in award dollars has increased from \$21 million to over \$283 million. These numbers do not reflect the funding made available through the HOPE Grant which is offered for technical certificate and diploma programs and is in addition to HOPE Scholarship funding.

### **Accountability and Higher Education**

Research on accountability is prolific and varied, with much of it focusing on academic success, performance, graduation rates, transfer rates, student preparedness, and barriers to success at the four-year level. Pearson, Vyas, Sensale, and Kim (2001) addressed both the positives and the negatives of accountability in higher education. They concluded that concerted effort must be given to consider all aspects of higher education including not only the more easily quantifiable areas, but also those not so easily accounted for. They stated that a common methodology for evaluating all institutions against an attainable set of criteria, which transcend institutional identity and autonomy, is a must for valued comparison purposes.



Strauss and Volkwein performed a study in 2002 which looked at 51 two and four-year institutions. In their study, effort was given to identify organizational characteristics that may influence the performance of students. A variety of institutional factors were analyzed, and their findings suggested that the institution's scope or mission does indeed have a relationship to student performance. They found the most significant influence was student involvement on campus. Their research stated that students on two-year campuses earn better grades while those at four-year institutions realize more personal growth based on the expanded services offered by the larger institution. Implications from the study suggest that campus involvement encourages student retention and accountability initiatives are multi-varied.

Mendoza, Mendez, and Malcolm (2009) produced a report from a study taking an in-depth look into the relationship of financial aid to persistence and subsequent student success. They investigated the relationship of financial aid packaging of Pell, loans and state sources to students from different demographic backgrounds controlling for socioeconomic characteristics of the study group. Their report suggested that while socioeconomic characteristics do have a relationship to persistence, these effects are mollified by ethnicity and income.

### **Summary**

Due to the high volume investment in cost of attendance, accountability is the impetus for much of the research into higher education. Available research is predominately segmented by the topics of financial aid type and/or academic success. Although effort has been given to study the effects of financial aid on access, retention, and persistence, attention has not been given to the type of financial aid received as an incentive to academic success at the course level. Pursuit of a quantifiable definition for accountability in higher education has initiated research covering a myriad of topics from institutional master-planning to student on-campus participation and

involvement as they relate to academic success which is the lynch pin of accountability.

Additionally, the majority of the research performed in these areas has been done at the four-year collegiate level. The gap in the current literature is an investigation into a potential relationship between financial aid type and academic success at the foundational course level. Opportunity exists for research to fill this gap in the current literature with an investigation as it relates to the relationship between financial aid type and academic success at the foundational course level in the public two-year college in Georgia.

### **Problem Statement**

A major issue in higher education is accountability. As participation continues to rise, costs increase, and financial investment via tax dollars continue to escalate, institutions and policy makers struggle to account for this investment in higher education. Much of the research that has been conducted in the area of financial aid and accountability involves how financial assistance, particularly federal financial assistance, offers students access, retention, and progression opportunities. Researchers have concluded that financial assistance provides avenues for minority student access to higher education (Reports, 2003). Research also suggests that financial aid assists students in their efforts to stay in school and attain a degree. This is commonly referred to as retention and progression. Much of this work has been conducted at the four-year higher educational level. Most, if not all, of the identified research that has been conducted is based on graduation rates or degree completion.

Available research has not investigated a potential relationship between financial aid type and academic success. Additionally, no research has been identified which attempts to identify a relationship between aid type and academic success as a potential identifier of success with regards to retention and progression which lead to graduation. Although graduation is the

ultimate goal of higher education, course completion is an integral step in the process and progression toward graduation. This gap in the research would offer insight into the potential influence of aid type received on academic success. Therefore, the purpose of this study is to determine if a relationship exists between financial aid type and academic success at the foundational course level in two-year colleges in Georgia.

### **Research Question**

This study will seek to answer the following overarching question: What is the relationship between financial aid type and academic success in a public two-year college in Georgia? Sub-questions include the following:

1. Do students who finance their higher education through student loans receive higher grades in foundational courses than students who finance their higher education through Pell Grants?
2. Do students who receive merit-based financial assistance (i.e., HOPE scholarship) receive higher grades in foundational courses than students receiving need-based aid (i.e., Pell Grant)?
3. Do students not receiving financial assistance receive better grades in foundational courses than students receiving some form of financial assistance?

### **Significance of the Study**

For the 2009-2010 aid year, the federal government provided 90 billion dollars in financial assistance to students seeking higher education in the United States (U.S. Department of Education, 2010). Available research has investigated the use of these financial assistance monies primarily in relation to making higher education accessible, as well as the effect on retention rates. There is a lack of research on the type of aid received and its effect on academic

success at the course level in public two-year colleges in Georgia. Research has not been identified which investigates the relationship, if any, of the type of aid received by a student to foundational course success. The gap in the literature provides the opportunity to determine if a relationship can be identified between financial aid type and academic success at the course level in public two-year colleges in Georgia.

As a study this research effort will be significant as an investigation into yet another avenue of the effect of financial aid on academic success in higher education. Financial assistance has inherent qualification characteristics. The aid type qualification characteristics are as follows: Pell Grant aid is need-based and does not require repayment; scholarships are based on academic merit and do not require repayment; loans are not need-based or based on academic qualification but do require repayment. As research has investigated the influence of financial assistance on enabling students to access or stay in school, there is a need to investigate all avenues of financial assistance and aid type qualification is an area where additional research is needed. Financial need, academic merit and restitution may indeed be related to academic success. This investigation would be a first step in a more thorough investigation of another possible influence of financial aid on higher education.

Much of the research available has been conducted at the four-year higher educational level. Less even still has been performed specifically on the higher educational system in Georgia. This research study will further that effort of providing information and feedback in an area where study is needed. Two-year and four-year institutions differ significantly in mission and demographics of the student body. This study will provide foundational information at the lowest level of Georgia's higher educational system with regards to any potential relationship of financial aid to academic success.

Much of the available research deals with access or retention which typically reflects the entry point into higher education or culmination of higher educational efforts in the form of graduation information for the student. This research will investigate the potential relationship of financial aid to academic success during the course of student study early in their higher educational pursuits before many of them have the opportunity to drop out or stop out for a multitude of differing reasons. Results of the study are of interest personally to this twenty-one year veteran as an enrollment services administrator and are anticipated to be of interest to higher educational administrators in Georgia and will hopefully inspire additional study throughout higher education in general.

### **Method**

The purpose of the study was to determine whether the type of financial aid that students receive is related to their academic success in foundational level courses in a public two-year college in Georgia. Accordingly, the investigation was ex post facto, utilizing a quantitative approach. This study compared course grades in specified courses among students who receive financial assistance in pursuit of higher education from the following sources: 1) grants, 2) scholarships, 3) loans, and 4) the student who receives no aid. An analysis of covariance was employed to obtain research results.

Sample sizes of 160 per variable (i.e., sex, ethnicity, EFC, financial aid type, and high school GPA) over a five year period beginning with fall semester 2006, were deemed adequate (Cohen, 1988) to observe whether a relationship exists between aid type received and academic success based on grades received in the foundational courses English Composition I, College Algebra and American Government. The data were sorted by course, grade, aid type, high school GPA, EFC, sex, and ethnicity. Calculation from the data determined a collegiate GPA for

the student in these three courses. Students who had taken a course more than one time had the last attempt of the course recorded for data analysis. Collegiate GPA was the dependent variable and type of financial aid, socioeconomic status, sex, and ethnicity were the independent variables in the study. High school GPA was determined to be a covariate for the purposes of the analysis.

### **Limitations, Delimitations, and Assumptions**

In order to quantify the results of this study, assumptions are made in the area of quantifiable variables. Grades and resultant grade point average is determined to be a quantifiable measure of academic success. ENGL1101, MATH1111, and POLS1101 are foundational courses required of all students who complete an associate degree from a public two-year institution in the state of Georgia. Many students do not graduate from the two-year college due to stop out or they choose to transfer prior to graduation. Success in the foundational level courses is a practical way of observing the relationship between types of financial aid and academic success.

Also, earned family contribution is deemed as an indicator of socioeconomic status. Earned family contribution is a calculation developed through the process of application for financial aid. The applicant provides personal financial information if they are independent and for parent or parents if they are dependent upon one or both for financial assistance. Based on this information, a determination of 'unmet need' is realized for the applicant. Unmet need is the difference between what financial assistance is currently available to the applicant in comparison to the cost of attendance at the student's chosen institution. This funding level determination is the amount of financial assistance provided to the student up to certain limits.

For the purposes of this study, the research was delimited to a single two-year public institution in the state of Georgia a part of the University of Georgia. Consequently, readers of this study are made aware that results are not generalizable to other colleges or other states.

### **Definition of Terms**

Several key terms used throughout the investigation require definition. Wherever possible, definitions used by the University System of Georgia and the U.S. Department of Education will apply. In other instances, sources are cited.

#### **Academic Preparedness**

For the purposes of this study “academic preparedness” is operationally defined as the readiness of the student upon graduation from high school to succeed academically in college level study.

#### **Aid Year**

Aid year when referenced in this study corresponds to the academic year in which the financial aid is received (U.S. Department of Education, 2011).

#### **Grade Point Average**

Grade point average is a calculation based on the number of hours earned divided into total points realized from the receipt of a grade in a course (2011, January 1).

#### **High School Grade Point Average**

For the purposes of this study “high school grade point average” is operationally defined as a grade point average calculation based on a set of courses all high school students are required to take for the purposes of attaining a college preparatory diploma and grades realized by the student in these courses.

#### **Merit-based Aid**

Merit-based aid is financial assistance where receipt of this form of aid is based on the academic qualification of the applicant. Academic qualifications are determined by the assistance provider based on academic standards of attainment (U.S. Department of Education, 2011).

### **Need-based Aid**

Need-based aid is defined as the calculation of unmet need for the purposes of financial aid. This number is determined by the federal government and is a ratio of income to cost of education (U.S. Department of Education, 2011).

### **Socioeconomic Status**

Socioeconomic status is defined as earned income as compared to standards of living as set by the U.S. Department of Commerce (U.S. Department of Commerce, 2009).

### **Stop Out**

For the purpose of this study “stop out” is operationally defined as the practice of a student discontinuing enrollment with no knowledge on the part of the institution as to why they chose to discontinue enrollment.

## **Summary**

The literature on academic success and financial aid is prolific and varied in scope and direction. Much of the literature has been conducted in the context of four-year institutions and based on access, retention and progression at these institutions. The increase in participation rates in higher education, in combination with the continued escalation in the cost and subsequent subsidization of these costs through tax dollars, offers the question of whether financial aid type received has a relationship to the academic success of the student.



The purpose of this study is to investigate the relationship between financial aid type and academic success in foundational coursework in a public two-year college in the state of Georgia. The primary benefit of this research project will be to offer research evidence in another avenue of higher education and financial assistance. Investigation of financial aid and the potential effect on academic success in the public two-year institution in Georgia will provide foundational information which could inspire continued research at other levels of higher education in this state and elsewhere. Subsequent areas of study might include a more detailed study on the effects of aid type qualification, institutional mission and financial assistance, or the effect of financial assistance on the transitional process of higher education students as they begin their educational pursuits. With the significant investment which is made in higher education in this country it is reasonable to assume financial assistance and higher educational success will continue to garner significant research interest for some time to come and this study provides additional information for this investigative process.

## **CHAPTER II**

### **REVIEW OF RESEARCH AND RELATED LITERATURE**

#### **Introduction**

The financial investment made in higher education is significant (Cheslock & Gianneschi, 2008). With this investment, accountability begs the question of what are we realizing from our investment (Drummond, 2006). Research in the higher education is extensive as a result of an added emphasis being realized from the increased investment in higher education in general. There is much research in the areas of financial aid, academic success, and degrees awarded. Much of this attention focuses on academic success, performance, graduation rates, transfer rates, student preparedness, barriers to success, and accessibility. The genesis for this research is a desire to provide insight into the question of what higher educational entities are doing with the money that is being offered in support of the higher education mission and a realization of what the student is receiving in the form of valued higher educational attainment.

The review of literature begins by synthesizing what researchers have found regarding the relationship between financial aid and academic success in higher education. Then, by way of providing context, it will delve into the history and development of the public two-year college from a national standpoint and a state level. A historical perspective of student enrollment will be provided from a national, state, and an institution specific level. Finally, financial assistance will be investigated, and detailed information will be provided concerning the evolution of financial assistance in this country. The gap in the current literature is the lack of research addressing the relationship between financial aid type and academic success in a public two-year college in the state of Georgia.

### **Financial Aid and Academic Success in Higher Education**

Higher education and financial assistance are intertwined as have not previously been seen. Long (2010) wrote an article on the interdependence today of financial aid and the availability of higher education to the general population within this country. In her report, she discussed the many benefits of higher education and the escalating costs of availing oneself of this opportunity. A report from the U.S. Department of Commerce website (2009) verified that as the cost of higher education continues to escalate and the demand for furthered education as a prerequisite for employment becomes increasingly important, students have availed themselves of financial assistance in record numbers. Not only did the student receive a larger volume of financial assistance, but a greater percentage of students availed themselves of the financial assistance opportunity in support of their higher educational aspirations.

Participation in higher education has many positive benefits. Trostel (2010) considered the benefits of higher education from a purely fiscal point of view. In his study, Trostel stated that continued education provides a significantly higher tax base from the citizens of a particular country through the increased wages realized by higher educational attainment. Morris (2011) stated in an article concerning women and higher education that equity in the availability of higher educational opportunities to women has allowed the equalization of professional opportunity between the two sexes. According to Morris, access to higher education has to some degree equalized the professional playing field with the increased opportunity now afforded to the female gender which they previously did not realize. Schieman and Plickert (2008) showed that higher educational attainment contributed to an individual's sense of self control. Through realizations of occupational worth and increased financial resources, individuals who attained an advanced education feel a greater sense of control in their everyday lives.

Through financial assistance many participants in higher education realize this opportunity from the receipt of public tax dollars. Under increasing scrutiny, higher education must provide results in the form of academic success from this public funding. Other research has strived to quantify reasons for this success or this failure of students in higher educational institutions. Strauss and Volkwein (2002) investigated 51 two and four-year institutions in search of answers to some of these questions. In their study, they identified organizational characteristics that influenced the performance of students. Among their findings was that the institution's scope (i.e., the range of programs offered) and mission was related to student performance. In addition, they found the most significant influencer was student involvement on campus. Their research further stated that students on two-year campuses earned better grades, while those at four-year institutions realized more growth individually. The primary reason for this was an increased exposure to academic and extracurricular factors offered through programs at the larger more diverse institution.

Other studies directed their attention at barriers of student access to determine how external influencers were related to the success of the student in the classroom and progression toward a degree. *Reports: Importance of Federal Student Aid Continues to Grow* (2003) stated that financial aid is one of those factors. The article illustrated the importance of financial assistance in pursuing higher education particularly for the minority student. The article stated that as more minority students avail themselves of the higher education opportunity, the reliance on financial assistance will continue to increase. The positive realization was that minority students availed themselves of financial assistance and subsequently higher educational access at greater rates than ever before. However, this also negatively impacted the financial burden to the taxpayer for this increased participation rate through increased costs.

Bragg and Durham (2012) considered the value of the access mission of the two-year or community college. Their study analyzed the value realized from this access mission versus the cost to operate the typical community college. Specifically, they attempted to analyze the benefit realized by the participants in the open access mission institution in consideration of the comparatively overall low success rate of the community college student versus the cost of providing that opportunity. They found that while the two-year college makes available to a greater percentage of the population access to higher education, many of these students are underprepared for the rigors of the higher education curriculum. Learning support or remedial coursework negatively impacted success at the post-secondary level by increasing the total cost of degree attainment through increased coursework, lengthening the time to degree, and ultimately a decrease in the overall graduation rate for the institution as many of these students did not realize graduation.

Persistence, graduation rates, and retention were also a subject of research. Mendoza, Mendez, and Malcolm (2009) investigated the relationship of financial aid and persistence at higher educational institutions in the State of Oklahoma. They determined persistence to be a qualifier of academic success and financial assistance to be an enabler for students to remain in college longer, therefore allowing them to complete their desired course of study. Johnson (2008) investigated the relationship of K-12 education on persistence and retention in higher education. In her study, she stated that there are multiple socioeconomic factors related to persistence and academic success for students at the post-secondary level including the number of parents in the household, the level of subsidized lunch programs, and the number of aptitude test takers at the K-12 institution. Nitecki (2011) performed a case study on the effect of the curriculum program on retention and graduation rates in the community college. In her study,

she determined that the curriculum program and value realized from the participant had a positive impact on the student and ultimately student success. Nitecki determined that if the program pursued is valued by the student and they can anticipate relevance in the labor market, then this perception enhances the overall success rate of the student in these programs.

### **History and Development of Public Two-year and Community Colleges**

The United States established and continues to support a system of junior and community colleges (Vaughan, 2006). Vaughn stated the mission of the junior college is to offer the first two years of a four-year education and to facilitate the transfer of a student to a four-year institution to complete a baccalaureate education. He also recognized the community college as one which offers a technical curriculum in a practical area of workforce development and an academic curriculum with a transfer initiative. Vaughn differentiated the two types of coursework provided through the community college. Technical coursework was designed to prepare a student for entering the workforce in a particular area. Academic coursework was designed to be transferrable to facilitate progression and the realization of the four-year degree. The true community college is referred to by Vaughn as a comprehensive institution due to its combination of technical education and academic continuity through its transfer initiative. The goal of the true community college is realized through placement in the workforce and or continuation through graduation or transfer to the four-year institution.

According to Vaughn (2006), access has been a major theme in American higher education since the end of World War II. Although a significant issue, he stated that access had not been readily available. He gave credit to three events which contributed to the proliferation of access to higher education, particularly to the community college. First, the baby boomers or children of returning soldiers from World War II, like their parents, they came to the realization

of the significance of higher educational attainment and potential opportunity which would be realized from that attainment. Second, through the Equal Rights movement of the 60's and the early 70's, minorities desired and realized greater access to higher education. Third, the political and social demands of educating the citizenry encouraged the realization of financial assistance programs enabling more individuals to attend college. He stated that the democratic form of government thrived and survived based on the philosophical belief in the educational attainment of its citizenry. Knowledge breeds individualism, introspection, and freedom of thought and expression.

Vaughn (2006) stated community colleges at their core have a mission of open access. Open access is not an entitlement. It does not mean that all may attend similarly to the entitlement of secondary education. It does mean that community colleges strive to make available the opportunity to attend. Community colleges acknowledge their mission to support the typically underprepared practitioners who take the initiative to attend. The intention being that this access and support will ultimately enable the student to be successful in their post-secondary academic endeavors. According to Vaughn, community colleges make the effort to bridge the gap between the underprepared K-12 graduate to post-secondary education through support services provided while attending the community college.

According to American Association of Community Colleges (AACC) (2012) the origins of the junior college can be traced to secondary education innovation. According to AACC, junior colleges were initially realized as an extension of the secondary educational experience in that communities extended the educational opportunity in many secondary environments to include a curriculum equivalent to the first two years of a post-secondary education. The first junior college was credited as being the Joliet Junior College created in 1901 in Joliet, Illinois.

Although the name implies junior college as being without a vocational component; in actuality, Joliet Junior College consisted of both the transfer and the vocational components found in today's community colleges.

The University of Wisconsin as illustrated by Snider (1999) and the University System of Georgia as defined by University System of Georgia (USG) (2012) are two states in the U.S. which have defined higher educational systems of true junior and community colleges. In each of these states a system prevails consisting of two higher educational components each with separate and distinct functions consisting of a transfer mission or transfer mission plus workforce development. What are effectively junior colleges in Georgia have as a core mission completion of the first two years of a post-secondary education and then transfer to a four-year program for completion of the baccalaureate degree. Technical institutions or colleges in Georgia have as a primary mission workforce development. That distinction is being blurred by the mission creep of the Technical College System of Georgia with an expansion of mission to include transfer. Effectively, this established the Georgia technical college more reflective of the community college concept as opposed to the technical institution (New Georgia Encyclopedia, 2012). Both the University System of Georgia and the Technical College System of Georgia have their own unique governing authority with the University System reporting to a Board of Regents and ultimately the governor and the Technical College system reporting to a state board.

### **National**

The origins of higher education can be traced to many different points in history. Bess and Webster (1999) wrote that the origins of the community college and or proprietary education can be traced back to the early days of this country. They illustrated the inception of the true technical college whose practical workforce development initiative did not afford the transfer of



coursework to an academic institution. The mission of the technical college was to prepare students for entry into the workforce in an area of specialty. They give credit for the conceptual formation of community college education to differing philosophical opinions shared by Thomas Jefferson and Benjamin Franklin. Jefferson favored the more classical education emphasizing liberal arts practiced in the United Kingdom, while Franklin supported the sciences and a more practical application of education which taught men a talent or a trade.

Cohen and Brawer (2003) credit the creation of the community college with the adoption of the 1862 Morrill Land Grant Act, which more readily made higher education available to all men. Through this legislative act, higher education became more available and more sought after, which in turn resulted in a dynamic shift from the classical liberal arts education to a more practical vocational tract. This increase in participation mandated a change in the direction of higher education to one directed more toward the primary business of the day, which was agriculture. According to the authors, the single most significant factor relating to the development of the community college was the demands placed on education at all levels. According to Cohen and Brawer (2003), whatever the social or personal ill of the time, education was a resource for fixing it.

Vaughn (2006) identified legislation, primarily the Morrill Act, as being influential in the development of the higher education in this country. He traced the origins of the community college back to the early 1900's. He stated that the first junior college was actually an extension of the comprehensive high school. According to Vaughn, local school officials approved the offering of the first two years of a four-year higher education in the local high school. At that point in time, the first two years of a four-year higher education were seen as preparation for the junior and senior years of a baccalaureate program.

Beginning in 1862 with the Morrill Act, Vaughn (2006) identified several milestones in the development of the community college as including the following: the founding of the Joliet Junior College in 1901, the adoption of the American Junior College Accreditation Standards in 1917, the California legislation fostering independent community college districts in 1921, the 1944 passage of the GI Bill of Rights, federal aid to higher education in 1963, and the 1972 establishment of the Basic Educational Opportunity (or Pell) Grant. According to Vaughn, although many of these are significant in their own right, the 1930 Asheville decision may have done as much for the community college as any of those listed above. Even as late as 1930, state legislation was still not present that enabled local community authorities to establish local higher educational entities. The authority of these local communities to do so was challenged in the State Supreme Court in Asheville, North Carolina. In their decision, the State Supreme Court upheld the authority of local authorities to educate its citizens in whatever manner determined to be in the best interest of the community as a whole.

Callahan (1962) suggested that the management of our current higher educational system is a reflection of changes brought about in the early 1900's with innovations realized from the Industrial Revolution. He stated that higher education in this country was affected dramatically by the invention of scientific management. Coupled with the Industrial Revolution and this new scientific management theory of breaking down industrial processes into pieces, the educational system in this country was subsequently affected through the growth of the business entity and the need for a more educated workforce. The theory of dissecting industrial processes and evaluation to attain ultimate efficiencies, was thought by many of the time to apply equally well to the higher educational practice.

According to Callahan (1962), the influence of business leaders on higher education significantly impacted the practice of the educational process. He stated that business leaders dictated the curriculum based on workforce needs and attempted to dissect the educational process as they would production assembly, with effort being given to identify the most cost effective and proficient means available to convey the educational process to the student. Additionally, Callahan stated that business leaders and industrial requirements of the time largely affected the curriculums offered by the institutions in response to the need for workforce development in these specific areas as determined by business leaders. Education had become subservient to big business.

### **State**

The history of the two-year institution in the state of Georgia consists of the technical institution and the junior college (New Georgia Encyclopedia, 2012). The origins of the technical college system in Georgia date back to the early 1900's and are rooted in federal legislation offering funding and authority for states to develop state boards for vocational education. By 1944, the first technical institution was established in Clarksville, Georgia. The first effort to collectively administer the collection of technical institutions occurred in 1958 when the State Supervisor of Trade and Education developed a series of policies directed at the coordination of technical institutions.

These policies paved the way for a unified system for the technical schools. In 1984, then Governor Joe Frank Harris created the State Board of Postsecondary Vocational Education which resulted in the eventual creation of the Department of Technical and Adult Education four years later. In 1986, a significant shift was realized in technical education as more than 20 technical institutions had their governing authority relinquished by local boards to state

governance under the auspices of Department of Technical and Adult Education. In 2008, the Department of Technical and Adult Education changed their name to the Technical College System of Georgia.

As with two-year education in general, two-year public education in Georgia has evolved. Vaughn (2006) described the beginnings of two-year education as one primarily rooted in the extension of high school curriculum or preparation to educational efforts directed at agriculture and mechanical arts. Two-year public education is no different. Present day South Georgia College, Abraham Baldwin Agricultural College, and Middle Georgia College would share the moniker of first two-year public institutions in the state (New Georgia Encyclopedia, 2012). As the current day name from at least one of these institutions suggests, Abraham Baldwin Agricultural College, agriculture played significantly in the initial development of these institutions. Today, each of these institutions have expanded comprehensively in scope to include specific four-year degree offerings, added collaborative relationships with four-year institutions to reach a broader student body population, and added amenities for increased appeal to new students. Each realized their beginnings at different times and for somewhat different reasons, but ultimately they became the initial elements of two-year public education in the University System of Georgia via the creation of the University System of Georgia by the state of Georgia in 1932.

The higher education system in Georgia has two distinct educational entities with separate governing authorities (New Georgia Encyclopedia, 2012) consisting of the University System of Georgia and the Technical College System of Georgia. In Georgia, the two-year institution has as a primary mission of completion of the first two years of a college education, resulting in the Associate of Arts degree, in preparation for transfer to a four-year institution and

completion of the baccalaureate program. The institutions within the Technical College System of Georgia have a primary mission of vocational education. In recent years, effort has been given by the governing body for the Technical College System of Georgia to expand the role of the technical institution with the request to offer the Associate in Science two-year degree and transferability of certain academic coursework to University System of Georgia institutions. In consideration of the expansion in mission, technical college institutions within this system have sought Commission on Colleges, Southern Association of Colleges and Schools accreditation to enhance the transferability of the academic coursework (New Georgia Encyclopedia, 2012). This mission creep by the technical institution is reflective of the community college concept described by Vaughn (2006).

### **Student Enrollment in Higher Education**

A report from the U.S. Department of Commerce (2009) indicated that the number of 18 to 24 year olds who have graduated with a high school diploma from 1967 through 2008 and who have gone on to post-secondary education has risen from 34 percent to 47 percent. Participation in post-secondary education has increased dramatically. Vaughn (2006) stated that in 1901 there was one community college in the U.S. Over time, this number has grown from that one in 1901 to 1186 by 2005. By comparison, community colleges in 1993 enrolled 5.6 million students and four-year colleges enrolled 6.95 million students. The enrollment numbers in higher education have consistently continued to rise since that time, and by 2002 community college enrollment was represented at 6.5 million students and the four-year college had an enrollment of 7.8 million students.

## National

According to the American Association of Community Colleges (2012), there are 986 public, 115 private, and 31 tribal institutions of higher education for a total of 1,132 community colleges in the United States. These colleges represent a fall 2009 enrollment of 8 million credit students and 5 million non-credit students. Table 1 depicts demographic data for the student population enrolled in community colleges nationally.

Table 1

*2012 Demographic Data of the Student Population Enrolled in Community Colleges Nationally*

Enrollment Status	
Part-time	58%
Full-time	42%
Sex	
Female	57%
Men	43%
Ethnicity	
Caucasian	54%
Hispanic	16%
African American	14%
Asian/Pacific Islander	6%
Native American	1%
Unknown	10%
First Generation	42%
Employed Full-time	21%
Employed at least Half-time	59%

According to the American Association of Community Colleges (2012), the annual cost to attend the local public community college for the in-state student is approximately \$3,000 per year. That same cost for the student attending the public four-year institution is \$8,300. State funds account for thirty-four percent of the college's total revenue. In addition, they receive an additional 20% from local funds, 16% from tuition and fees, 16% from federal funds, and 13% from other sources. For the year 2008-2009, these same institutions graduated a total of 630,000

students with an associate degree. A total of 425,000 students attending these institutions earned either certificates or diplomas.

### State

The American Association of Community College (2012) also reported that enrollment in 2005 for community colleges in Georgia totaled approximately 153,000 students. Table 2 depicts demographic data of the student population enrolled in community colleges in Georgia.

Table 2

*2012 Demographic Data of the Student Population Enrolled in Community Colleges in Georgia*

Enrollment Status	
Part-time	52%
Full-time	48%
Sex	
Female	63%
Men	37%
Ethnicity	
Caucasian	53%
African American	37%
Resident Alien or Unknown	4%
Asian/Pacific Islander	3%
Hispanic	3%

The University System of Georgia (2012) provided information pertaining to enrollment at all system institutions. According to that report, the enrollment in these institutions has increased since 1968 from an enrollment of 76,231 to over 300,000 for the year 2009. These numbers reflect the enrollment increases in the academic or transfer institutions in the state and do not reflect enrollment increases in the technical institution. Specifically for two-year institutions within the University System of Georgia, the enrollment for Fall 2010 was approximately 91,000 students. Table 3 depicts demographic data of the student population enrolled in two-year colleges in the University System of Georgia.

Table 3

*Fall 2010 Demographic Data of the Student Population Enrolled in Two-Year Colleges in the University System of Georgia*

Enrollment Status	
Part-time	41%
Full-time	59%
Sex	
Female	62%
Men	38%
Ethnicity	
Caucasian	49%
African American	32%
Hispanic	6%
Unknown	6%
Asian/Pacific Islander	4%
Two or More Races	2%
Native Hawaiian	less than 1%
Native American	less than 1%
Student Average Age	25 years old

### **Financial Aid – History and Development**

Financial aid is viewed as an opportunity not only to grant students who lack the financial resources to avail themselves of the higher education opportunity, but also as a measure of their continued enrollment beyond the initial experience in post-secondary education (Overstreet, 2004). Without financial assistance, students who require such a resource would not be able to pursue higher education. Effort has been given to study the effects of financial aid enabling students to continue their studies toward a degree. Persistence and success in much of the writings and research seem to suggest that success is a by-product of persistence (Overstreet, 2004). Continued persistence is recognized as the precursor to success. Without success, the student would be unable to enroll and unable to continue to receive financial assistance to pay for his/her enrollment.



Overstreet (2004) summed up the interest exhibited in the success and achievement of students in our higher educational programs by suggesting that assessment plus retention equals student success. Her suggestion is that to enhance the retention rate at an institution instinctively enhances the success of the student and ultimately the overall success rate of the institution. As the investment grows in higher education we see not only the practitioners at higher educational entities requiring feedback concerning the success rate of an institutions students, but also parents, lawmakers and the government, all of whom subsidize the cost of higher education. In the end, the question is what is the student realizing for his/her investment in higher education.

Brock (2010) stated that higher education and financial aid are becoming more and more synonymous with one another. As the realization of the importance of continued education beyond the secondary level is becoming increasingly recognized by the general population, individuals are taking advantage of higher education opportunities in this country at historically high rates. Many individuals need financial assistance to pursue post-secondary education (Reports, 2003). At the federal, state, and local levels, assistance is being provided in many forms toward the pursuit of a college education.

Historically, the cost per credit hour of two-year education has been less than the cost per credit hour at the four-year institution (American Association of Community Colleges, 2012). Seybert and Rossel (2010) indentified cost drivers in higher education by comparing cost differences between two and four-year institutions. In their study, credit was given to the lower per credit hour cost of two-year education to the significant use of part-time instructors. In particular, the use of part-time faculty results in two-year colleges not having to pay health benefit costs. In their research, Seybert and Rossel emphasized studies of the Delaware and

Kansas systems. These studies examined the cost of instruction at the four-year institutions in Delaware and the two-year institutions in Kansas.

Two-year and or community colleges have struggled economically, but consistently maintained a lower cost of attendance than the traditional four-year institution (Seybert & Rossell, 2010). According to them, several reasons for this are scope, instruction, and services. Two-year colleges offer fewer programs than four-year colleges. This narrowing of focus allows for greater efficiencies in the allocation of resources. Moreover, the use of part-time instruction is a reduction in cost as benefits are not incurred as a cost to the employer. Through a reduced number of services provided to students, two-year institutions also realize cost reductions. Seybert and Rossell (2010) stated two-year institutions typically offer fewer services in comparison to four-year institutions as they typically are not trying to be all things to all students.

According to a published report on the College Board website (2010), Trends in Higher Education, the 2009 yearly average cost for in-state residents to attend a public four-year institution was over \$7,000 per year. The same cost of attendance for in-state resident students to attend a public two-year institution was \$2,544 dollars. These costs are based on public education and the cost of students attending higher education in their home state. Since the 1978 school year, the average cost of attending a public four-year institution has increased by \$4,300 through the 2008-09 school years.

Archibald (2008) stated costs for participation in higher education have continued to escalate. Tandberg (2010) stated public institutions receive a majority of their funding from taxpayer dollars. Both state and federal governments make an investment in higher education by subsidizing the cost of higher education through the dedication of a portion of tax receipts to the

support of higher education. According to the University System of Georgia website (2012), state appropriations derived from tax dollars support higher education at a rate of approximately seventy-five percent of the total cost of higher education. That number is now decreasing due to economic constraints. The individual institutions account for the balance of the cost of higher education through generated income in the form of fees whether they are for tuition, books, services, or amenities. Doyle and Delaney (2009) stated that higher education budgets would be restrained this year and likely again in 2010. They give two primary reasons for higher education being looked to in economically depressed times for budget cuts. One, colleges have the ability to generate revenue; and two, college students are typically not considered the neediest of the population within the state.

Doyle and Delaney (2009) stated in their article that as the economy has lagged over the last several years, states in particular are struggling to stretch every public dollar as far as possible. Reduced funding is impacting higher education as governments are looking for ways to decrease infrastructure to extend the public dollar as far as possible, while higher education is attempting to balance the conundrum of reduced funding but maintaining service levels previously provided and desired by students. With decreasing budgets and increasing enrollment, the task is a difficult one. Costs for higher education are being passed along to students and, ultimately, parents who are feeling the squeeze to the point of not being able to provide for the cost of attendance for their children to pursue higher education.

According to a report on the U.S. Department of Education website (2009), financial assistance is more important than ever for students attempting to complete a higher education degree. Axtell (2003) concluded that, whereas in public secondary education the cost of attendance is paid for via tax dollars, higher education is not a right but a privilege which has to

be paid for. The cost of attendance is subsidized via tax dollars, but a portion of the cost is passed along to the student. According to a report published by the U.S. Department of Education (2009) concerning enrollment and financial aid, the percent participation rate from the 2000-2001 aid year to the 2007-2008 aid year has increased from 70% to 75%. Not only has the participation percentage increased over this time period, but the number of participants has also increased by over five hundred thousand first-time full-time students in our colleges and universities.

Financial aid is intended to assist students being able to attain post-secondary education. Financial assistance is provided at the local, state, and federal level in many different forms. The primary purpose of financial aid is to act as a bridge to assist students and parents in filling the gap between what they are able to provide financially to cover the cost of attendance in higher education. There are many manners in which students may be eligible to realize financial assistance. Merit-based aid in higher education is offered to students who perform at a particular academic level in their secondary educational efforts. Need-based aid is determined by what a student can show they need as a bridge in their finances in order to attend a higher educational institution.

### **Pell Grant**

There are many different types of financial assistance. Three primary types of funding assistance are the federal Pell Grant, federal loans, and state scholarships (U.S. Department of Education, 2010). The Pell Grant is a federal source of funding which does not require repayment. It is based on need. Through a standard application process, the applicant supplies directed information concerning their personal and socioeconomic characteristics and financial resources available to each either in the form of personal finances or those of their parents. An

earned family contribution, or EFC, is determined which is the amount the person or family is expected to be able to provide the student in order for this person to be able to attend college. The Federal government will then subsidize the cost of attendance through the student to the school for the cost of the education.

Mendoza, Mendez and Malcolm (2009) produced a report from a study which took an in-depth look into the relationship of financial aid to persistence and, subsequently, student success. Their report investigated the relationship of socioeconomic factors of students from certain demographic backgrounds coupled with the three primary funds of financial assistance; Pell, loans, and state sources and how this packaging of financial aid combined with different socioeconomic characteristics were related to the persistence of the student. Their report stated that while these characteristics do have an relationship to persistence, enabling the student to sustain a longer period of enrollment, these effects are modified by ethnicity and income of the student. Results indicated that African American students, although representing a larger total portion of the sample population were less likely to progress to the second year. Similarly, Caucasian students from lower socioeconomic standings who received federal financial assistance were less likely to progress to the second year of study, while Caucasian students from higher socioeconomic families receiving similar financial assistance were more likely to progress to the second year.

According to a report published by the U. S. Department of Education (2010), the Federal government issued Pell Grant awards to more than 5.5 million students in the 2009-2010 aid years. The sum of the monies awarded to these individuals ranged from \$400 to over \$4,300, and the total award amount from Pell Grant for this aid year exceeded \$14.5 billion dollars. Pell Grant awards do vary since they are subject to annual budget negotiations of U.S. Congress.

## **Federal Loan Program**

Federal loans come in two forms, either subsidized or unsubsidized. Subsidized loans are need-based and do not involve an interest payment until six months following the last date of attendance by the student (U.S. Department of Education, 2010). Unsubsidized loans are not need-based and incur an interest amount from the inception of the loan. Loans of either type funded by the Federal government do have a maximum yearly amount. Any student is eligible to receive a loan and the repayment option includes a reduced interest rate in hopes of making the loan accessible and serviceable by the student at the conclusion of the student's academic career.

In a 2009 report produced for the President of the United States on the status of financial assistance, the U. S. Department of Education (2010) reported that for the 2009-10 aid years there were more than 13 million borrowers of subsidized and unsubsidized loans with a total volume exceeding 74 billion dollars. The state of Georgia alone accounted for over \$630,000,000 in student loans for the year.

According to a recent report ("Student Loans in Bankruptcy," 2011), student loans are particularly problematic - due primarily - to the repayment issue. Nearly 60% of the revenue generated today by higher education institutions is realized from students receiving student loans. According to this article, 62% of students graduating from public universities do so with some amount of student loan indebtedness. That number increases to 72% at private universities. And at for-profit institutions that number increases dramatically to 96%. The state with the highest student loan debt was determined to be Arizona, home of the for-profit University of Phoenix.

Dowd and Coury (2006) performed a study which investigated the effect of the student loan program on persistence and degree attainment in the community college. In their study,

student loans had no apparent effect on contributing to the persistence of students towards a degree in the community college environment. The researchers in this study determined that the low anticipation rate of community college students concerning degree completion and the potential negative effect of debt incurrence were the likely reasons for the failure of the student loan program to show positive academic progression effects for these students.

Loans are coming under more intense scrutiny (Fields, 2005). Fields stated that legislators are increasingly aware that merit-based aid, in comparison to need-based aid, is perceived as a more efficient and effective mechanism of making available higher educational funding. The concern expressed by Fields was that funding ordinarily designated for need-based programs should be redirected to merit-based programs based on the perception that merit-based programs had a more positive effect on retention and graduation. The author determined that at least as late as 2003 that this was not the case and the perception that merit-based aid offered more positive results in the form of retention and graduation had not redirected funding initiatives in these areas. Need-based programs still accounted for more than 75% of the funding made available to students in the pursuit of higher education. Merit-based funding accounted for approximately 25% of this funding.

Mattera (2011) stated that student loans have been determined by the Federal government as being unforgivable. Students who receive loans and find themselves unable to repay these loans do not have the option of filing bankruptcy and absolving themselves of this debt. Mattera stated that many recipients of these student loans question the federal government's policy that student loans cannot be cancelled. The common argument given for supporters for this policy is that if Wall Street investment banks can be forgiven of their financial indebtedness, then these student loan recipients should be absolved of their debts as well.

## **State Scholarship Program - Georgia**

Through the lottery funding the State of Georgia has established the Helping Outstanding Pupils Educationally (HOPE) Scholarship program, which is available to students who achieve a certain level of academic performance during high school (Georgia Student Finance Commission, 2010). The high school at which the student attended and graduates forwards the student's academic information to the Georgia Student Finance Commission which then determines eligibility. The student will receive assistance in the form of cost of attendance monies which are designated and disbursed to the chosen institution in payment for attendance.

According to the Georgia Student Finance Commission (2010), the number of recipients has grown from 43,000 in 1993 to over 158,000 in 2010. During that same time period, the total volume in award dollars has increased from \$21,000,000 to over \$283,000,000. These numbers do not reflect the funding made available through the HOPE Grant that is offered for technical certificate and diploma programs, which is not merit-based and will pay for up to two programs for any individual choosing this educational pursuit.

Merit-based financial support receives a considerable amount of public attention based on the idea that these recipients of funding are more likely to stay in and complete their higher educational pursuits. Goetz, Mimura, Desal and Cude (2008) conducted a study in which they investigated the effect of merit-based financial assistance, HOPE, versus non-merit-based funding and the effects of the type of funding on the participant. Their study determined that students who retained HOPE assistance were less dependent upon loans and credit cards than those who did not retain their HOPE funding. Further, findings suggest that students who do not retain their HOPE assistance may in fact be more financially vulnerable than was originally anticipated.



Part of the concern with merit-based funding for higher education is the distribution of this source to the typically more affluent and financially stable households (Campbell & Finney, 2005). Campbell and Finney (2005) conducted a study to assess the accuracy of the concern. The purpose of their study was to investigate the dispersion of HOPE funds across socioeconomic boundaries. HOPE funding is generated through financial receipts generated by lottery resources. They concluded, as a percentage of total family income, that lower socioeconomic groups did support to a greater degree this form of merit-based funding. However, certain geographic localities, typically represented by higher populations of individuals identified in lower socioeconomic groups, did receive greater percentages of financial support through HOPE funding. These findings somewhat mitigated the socioeconomic influence suggesting that while lower socioeconomic groups as a percentage of total family income may contribute a greater percentage to lottery funding, these groups may also receive a greater portion of the benefit of the funding.

Deafenbaugh (2007) took another avenue to consider student achievement in her study of how socioeconomic status is related to student achievement. In her study, the author examined the success rate of students from low socioeconomic families. Specifically she explored the factors that seemed to contribute to their academic success. Her study identified that as significant as access and funding were to providing opportunities student involvement on the campus was the greatest contributor to success.

Fields (2005) discussed the difficulty of retaining merit-based aid such as HOPE. She found that in Georgia approximately three out of four freshman students who were initially eligible to receive HOPE funding out of high school did not retain that funding through their senior year. She further stated that just over 35% of students retained HOPE from their freshman

to their sophomore year. Implications are this form of merit-based funding does not contribute significantly to persistence and ultimately graduation due to the inability of the student to be able to retain this form of financial assistance.

### **Summary**

The preceding pages of this review of literature have illustrated the significance of financial assistance in the pursuit of higher education today and an anticipated increasing dependence due to rising costs. The significant investment made through public support of higher education is evidence of the priority our society places on the continuation of a person's studies beyond the secondary educational level. Given the importance of higher education and the financial support of students who pursue it, numerous studies have been conducted to help inform public policy on financial aid.

What the literature review does not identify is research that investigates if the type of financial assistance received can be related to academic success. More specifically, research is limited with regards to the smaller two-year institutions within our higher educational system within this country. This can be attributed in part to academic success in higher education being attributed primarily to the attainment of the four-year baccalaureate degree. Historically, two-year institutions have been seen as having primarily a transfer mission. Transfer has largely been left undefined with regard to academic success within higher education. Another aspect of financial aid policy that should be studied is the relationship of financial aid type and academic success in the public two-year institution in the state of Georgia. With the significance of the dollar volume of financial assistance being directed at students for the purpose of educational attainment and given the differing types of financial assistance that students can avail themselves

of, could it be that the varying types of financial assistance may have a relationship to the academic success of the student?

Pell Grant is need-based and does not require repayment. HOPE is merit-based and does not require repayment. Loans, however, may be either subsidized or unsubsidized and in both cases require repayment. It may be of interest to consider if the type of aid a student receives, each with quantifiably different characteristics, may be linked to the academic success of the student. Certain factors have been identified as potential predictors of the academic success of students in the higher educational endeavor. Primary among these potential predictors are socioeconomic and aptitude attributes of the students participant to the research. One could assume that with merit-based aid the student is beginning his/her entry into higher educational studies at an accelerated level as compared to the need-based student. Therefore, the assumption could be made that the student receiving merit-based aid would perform at a higher level than the student receiving the need-based aid.

Additionally, the issue of repayment and the potential relationship of this requirement to academic success has not been considered by researchers. Grants and scholarships require no repayment on the part of the student to the provider of the financial assistance. Loans, whether subsidized or unsubsidized, incur a repayment option. It could be suggested in cases where students are required to repay funding provided in support of academic pursuits that this would impose on the student a greater sense of responsibility than in cases where funding is provided and no anticipation of return of this funding is expected. The question would be the relationship of an expectation on the part of the student concerning repayment on the academic success of the student in his/her higher educational pursuits. Investigation of the issue might offer some insight

or at least eliminate an element which has failed to realize attention for research purposes to this point.

## **CHAPTER III**

### **METHOD**

#### **Introduction**

The purpose of this study was to investigate whether there is a relationship between financial aid type and academic success in a public two-year institution in the state of Georgia. Financial assistance contributes significantly to higher education in the form of subsidy to the participants in higher education through student financial aid. According to the U.S. Department of Education (2010), for the 2009-2010 aid year the federal government provided 90 billion dollars in financial assistance to students seeking higher education in the United States. Much of the research available on this topic is based on data provided by four-year institutions. Less research was available specifically related to two-year institutions, and in particular those in Georgia. Research was not identified which investigates the aid type and potential relationship to academic success. This gap in the literature provided the opportunity for investigation into determining if a relationship exists between financial aid type and academic success in a public two-year college in Georgia.

#### **Research Questions**

This study sought to answer the following overarching question: What is the relationship between financial aid type and academic success in a public two-year college in Georgia?

To answer this question it was necessary for the investigation to consider grades earned in coursework while in attendance at a higher educational institution and the type of financial assistance received by the student during this time. It was also necessary to consider factors such as any inclinations a student may have for a particular subject area, the academic skill level of

the student upon entry into the higher educational setting, socioeconomic factors, sex, and ethnicity of the student. The following sub-questions also offered the opportunity to enhance and expand on the overall research question and provide supplemental observation to any conclusions that may be drawn from the study:

1. Do students who finance their higher education through student loans receive higher grades in foundational courses than students who finance their higher education through Pell Grants?
2. Do students who receive merit-based financial assistance (i.e., HOPE scholarship) receive higher grades in foundational courses than students receiving need-based aid (i.e., Pell Grant)?
3. Do students not receiving financial assistance receive better grades in foundational courses than students receiving some form of financial assistance?

### **Research Design**

The purpose of the study was to determine whether the type of financial aid that students receive is related to their academic success in foundational level courses in a public two-year college in Georgia. Data currently exists that provided the basis for the historical study. Accordingly, the investigation utilized a quantitative approach with an ex post facto design. Specifically, this study compared course grades in specified courses among students who receive financial assistance from the following sources of aid: 1) grants, 2) scholarships, 3) loans, and 4) students receiving no aid. The data used for evaluation are retained electronically by a public two-year college in the State of Georgia.

Data for a five year period beginning with the fall of 2006 formed the basis for this study. Included in the data retrieval was information concerning financial aid type, course prefix,

course number, grade, high school grade point average (GPA), earned family contribution (EFC), sex, and ethnicity. High school GPA is identified as an indicator for aptitude out of high school or how well the student is prepared for post-secondary study (Sparkman, Maulding, & Roberts, 2012). A high school GPA is calculated for each applicant upon admission into the institution. For the purposes of this calculation, the institution considers a specific set of courses required of all students as a part of their high school curriculum. Grades from these common set of courses are used in determining the high school GPA for each student. Consistency is realized for this calculation due to the same set of courses being used for each applicant in determination of this GPA.

### **Population**

The population for this study was based on students who enrolled in a small public two-year institution part of the University System of Georgia from fall 2006 through spring 2011. The admission policy of the institution is one primarily of open enrollment. Therefore, many of the students are the first in their family to progress on to higher education. Academic aptitude varies significantly for the student population. Accessibility, both in terms of cost and proximity to home, is the institution's appeal to prospective students. The institution is located in a rural area of the state, which accounts for the relatively low socioeconomic status of many of the students. Many of the students attending the institution receive some form of financial assistance. The varied nature of the student body academically and the relatively low overall socioeconomic status of the student population in general presents significant opportunity to investigate the potential relationship of financial assistance to academic success. Approximately 15,000 records comprised the database for the purpose of analysis.

## **Sample**

Power analysis was conducted to determine the minimum sample needed to have adequate statistical power to detect mean differences in collegiate GPA by various aid types. A successful sample size for this study was considered to be 160 students (Cohen, 1988) in each category for the five variables; sex, ethnicity, EFC, financial aid combination and high school GPA based on students who have enrolled in and completed the foundational courses. The researcher used an alpha error rate of .05, power level set at .80, eight degrees of freedom and effect size or 'r' value of .3. A sample size for each group of at least 160 instances will appropriately reflect the tendencies for each group.

It was determined by the researcher that a sufficient sample size was attainable within the timeframe specified. Had it not been, additional data may also have been obtained by stepping back annually from fall 2006 until a sufficient sample size was realized. It was considered probable that five years worth of data would provide the necessary sample size of 160 subjects per group of students. It should also be noted that data for the study were attained from 2006, 2007, 2008, 2009, and 2010 academic years, resulting in a range for the study extending from the fall 2006 semester through spring 2011, a five year period.

Data for the purposes of this study are stored electronically in a database maintained by the institution. Approval to obtain the data for use in the study was gained through consent from the Internal Review Board (IRB) at the institution.

## **Data Collection**

Data were collected from a public two-year college in rural southeastern Georgia which is a part of the University System of Georgia. This institution has an enrollment exceeding 3,000 and is an open admission institution. Requirements for admission to the institution are based on



the successful completion of a high school college preparedness diploma or successful completion of the General Equivalency Diploma (GED) test. The range of academic aptitude for applicants spans from underprepared students who are required to take pre-collegiate coursework to students who score above the national average on the College Board Scholastic Aptitude Test.

Beginning with spring semester 2011 and extending back to the fall semester of 2006, data were collected based on the following elements: completion of foundational courses in Area A and E of the core curriculum in English (ENGL1101), Math (MATH1111), and American Government (POLS1101); type of financial assistance received in the form of 1) Pell Grant, 2) HOPE scholarship, 3) student loans, and 4) student receiving no financial assistance; high school GPA information; EFC information; sex; and ethnicity.

Earned family contribution, or EFC, was determined for the purposes of this study to be an indicator of socioeconomic status (Johnson, 2008). EFC is determined at the point at which the student applies for financial assistance. EFC is a determination of the level of support which the family of the applicant should be able to contribute toward the expenses of post-secondary education.

The calculation for the EFC is based on multiple factors. The first determination for the purpose of the calculation is the dependency status of the student. If independent, the student provides financial information based on self. If dependent this information must be obtained from the parent or legal guardian. A declaration is then made based on enrollment status either full-time which is 12 or more hours, three quarter time which is 9-11 hours, half time which is 6-8 hours, or less than half time which is 1-5 hours. Family size and number within the family who are currently seeking higher education is requested. Number of parents, for a dependent student, and age are requested. State of residency and income tax information including

information concerning earned income credit, home equity and business worth must be provided. If the applicant is filing independently, the applicant must provide spousal information and, if appropriate, financial information. Finally, cost of education is included in the calculation including tuition and fees, meals, housing expenses, and the cost of books and supplies are to be estimated.

All students applying for Federal assistance must complete an application for assistance by completing the Free Application for Federal Student Aid (FAFSA). During processing of the FAFSA, the Department of Education (DOE) determines for each applicant an EFC. EFC is based on adjusted gross income amounts reported to the federal government for income tax purposes, as well as, other information. The higher the adjusted gross income of the principal supporter of the applicant, whether that be family, legal guardian or self, the higher the EFC for the applicant for financial assistance. The EFC determines whether a student is eligible for a Pell Grant and, if so, the amount of the grant.

For the purposes of this study, the researcher grouped the EFC for the sample participants into 4 groups. A blank EFC meant the sample participant did not apply for federal financial assistance. A "0" calculated EFC was grouped to identify the sample participant as having been eligible for the maximum amount of assistance. Applicants receiving the maximum amount of student assistance are identified as having the greatest financial need and are subsequently in the lowest socioeconomic group. Sample participants with an EFC between 1 and 5081 were determined to be eligible for some financial assistance, but not the maximum amount. Based on the grouping methodology, this group would be in a higher socioeconomic status. Finally, the group with a greater than 5081 EFC was determined to not be eligible for

financial assistance. Their EFC based on the calculation prevented them from being eligible for federal financial assistance placing them in the highest socioeconomic group.

Initially, the data were loaded into an Excel spreadsheet in the following manner: course prefix, course number, grade for the course, financial aid type, high school GPA, EFC, sex, and ethnicity. The researcher then calculated the collegiate GPA for the grades awarded in completion of the foundational courses ENGL1101, MATH1111, and POLS1101. Participants in this study completed all three courses prior to consideration of academic success. The significance of the foundational courses chosen is that all students are required to take these courses during the normal course of completing the curriculum to attain a degree from the two-year institution. The courses were also chosen due to the typically early registration for these courses in the completion of the two-year degree. Early completion enhances the population from which to draw the sample since many two-year students transfer or stop out prior to graduation. Stop out is defined as an indefinite and unknown separation of the student from their higher educational experience. These courses were also identified for the purposes of this study as each course represents a different area of discipline: Humanities, Math Sciences, and Social Sciences. It was the purpose of the research to attempt to control for any affinity on the part of the student for a particular area of study.

Grades of A, B, C, D, F, and WF were used in determining the collegiate GPA for the sample student. GPA was calculated based on points assigned for each grade code. The grade of “A” equals 4 points. The grade of “B” equals 3 points, a “C” equals 2 points, a “D” equals 1 point, and “F” or “WF” equals 0 points. All three of the foundational courses award 3 credit hours earned for passing grades. Passing grades are A, B, C, and D. The credit hours for the foundational course were multiplied by the points realized for the grade received in the courses.

The credit hours were summed for each student. The grade points were summed for each student based on grades received in the foundational courses. The grade points for the student were divided by the sum of the credit hours for each student to determine the collegiate GPA for the student. Incomplete grades, withdrawal grades, and audit grades were not used for the purposes of this study as they do not count in the calculation of the GPA. Students who have taken a course more than one time will have the last attempt of the course used in the evaluation.

The data were imported in the SPSS statistical analysis software for an analysis of covariance (ANCOVA). The analysis of covariance provided results for potential relationships of the independent variables to the dependent variable, taking into consideration aptitude out of high school, socioeconomic status, financial aid combinations, sex, and ethnicity and the relationship of these variables to the dependent variable collegiate GPA realized in the foundational courses.

### **Summary**

This investigation utilized an ex post facto design. The primary research question addressed in this investigation was what is the relationship between financial aid type and academic success in a public two-year college in Georgia? The sample for this study was based on students who enrolled in a small public two-year institution part of the University System of Georgia from fall 2006 through spring 2011. Successful sample size for this study was considered to be 160 students (Cohen, 1988) in each category for the following variables (e.g., sex, ethnicity, EFC, financial aid combination, and high school GPA) based on students who have enrolled in and completed the foundational courses. To attain the appropriate sample size an alpha error rate of .05, power level set at .80, eight degrees of freedom and effect size or 'r' value of .3. The data were imported in the SPSS statistical analysis software for an analysis of

covariance (ANCOVA). The analysis of covariance provided results for potential relationships of the independent variables aptitude out of high school, socioeconomic status, sex, ethnicity, and financial aid type to the dependent variable collegiate GPA calculated from grades received in foundational courses.

## **CHAPTER IV**

### **REPORT OF DATA AND DATA ANALYSIS**

#### **Introduction**

The purpose of this study was to investigate the relationship between financial aid type and academic success in a public two-year institution in the state of Georgia. Financial assistance contributes significantly to higher education in the form of subsidy to the participants in higher education through student financial aid. According to the U.S. Department of Education (2010), for the 2009-2010 aid year the federal government provided 90 billion dollars in financial assistance to students seeking higher education in the United States. Much of the research available on this topic is based on research done at the four-year institutional level. Less research was available specifically related to two-year institutions, and in particular those in Georgia. Research was not identified which investigates aid type and a potential relationship to academic success. This gap in the literature provided the opportunity for investigation into determining if a relationship exists between financial aid type and academic success in a public two-year college in Georgia.

#### **Sample**

For the five year period fall 2006 through spring 2011, the sample consisted of a total of 3,211 records. Initially, the extracted database consisted of the raw data for the variables sex, ethnicity, high school GPA, grades for the foundational courses identified for the purpose of the study, a indicator of the receipt of financial assistance by the student, EFC, and a indicator of the type of financial assistance received.

Once data were gathered, a collegiate GPA was calculated for each sampled participant based on the grade received in the foundational courses POLS1101, ENGL1111, MATH1111.

To determine a grade point average the alpha representation of the grade was weighted numerically. The grade “A” received 4 points. The grade “B” received 3 points. The grade of “C” received 2 points and the grade of “D” received 1 point. All other grades receive 0 points. The number of hours were then determined for each of the sample participants. Each of the foundational courses are worth 3 credit hours. It should be noted that grades of “W”, “WM”, and “I” do not count in the collegiate GPA calculation. In these instances where grades were assigned to the sample participant; 0 hours were attributed to the course. In this manner the sample participant was not ill-effected for the purposes of the study receiving no points for the grade and no hours for computation purposes. The grade “WF” does carry a penalty. While there are no points attributed to the grade, the hours, 3, are calculated in the collegiate GPA. Subsequently, sample participants receiving the grade of “WF” received 0 points and 3 credit hours.

The researcher then summed the points for each of the foundational courses and the hours for each of the sample participants. The total points were then divided by the number of hours for each of the sample participants. The total number of points could range from 0 – 12 and the total number hours could range from 0 – 9. The division of the grade points by the total number of hours provided for the purposes of the study the collegiate GPA in the foundational coursework. Once the calculation of the collegiate GPA information was completed the course prefix, course number, and grade information were deleted from the database for all sample participants.

Following the calculation of the collegiate GPA for the analysis, the researcher considered the predictive factors within the study including sex, ethnicity, EFC, financial aid type, and high school GPA. In the data, sex was represented by “M” for male and “F” for

female. These data were not changed as it lent itself appropriately to the ANCOVA analysis. Ethnicity was represented in the data by a range of values identifying eight different ethnic groupings. The majority of the sampled students in the data reflected either a “W” White or “B” Black ethnicity. Since the remaining six categories for ethnicity were statistically small, the ethnicity data were converted to reflect three primary groupings of students: “1” White, “2” Black, and “3” other.

EFC was also converted for comparability purposes. Since the EFC information was numerical and ranged from blank or no EFC due to the fact that the student did not apply to an infinite range of numbers, categorizing the data into these four standard groups enhanced the comparability of the data in the study. A representation of the converted EFC data is illustrated in Table 4 below.

Table 4

*Conversion of Earned Family Contribution (EFC) Data*

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EFC Conversion

<u>Original Data – EFC</u>	<u>Converted to</u>	<u>Representation</u>
Blank	0	Did not apply for financial aid
0	1	Received maximum allowable amount financial aid
1 – 5081	2	Received some aid but not maximum amount
Greater than 5081	3	Not eligible for financial assistance

---

Financial aid type was similarly categorized for the purpose of the study. The four different aid groups (i.e., Pell Grant, student loans, HOPE, and “No Aid”) formed the following combinations presented in Table 5.



Table 5

*Frequency display of the financial aid type combinations received by student*

	Frequency	Percent	Cumulative Percent
No aid	480	15.4	15.4
Pell	395	12.7	28.1
Loans	406	13.1	41.2
HOPE	294	9.4	50.6
Pell and loans	819	26.3	76.9
Pell and HOPE	355	11.4	88.3
Loans and HOPE	150	4.8	93.1
All aid types	215	6.9	100
Total	3114	100	

The resultant database consisted of six variables of data: sex, ethnicity, high school GPA, collegiate GPA, EFC conversion, and aid type received conversion. Table 6 below represents the frequencies of variables and categories in the study.

Table 6

*Frequencies of Variables and Categories in the Analysis*

Variable	Categories	Frequency	%
Sex	Female	1844	59.2
	Male	1270	40.8
Ethnicity	White	1824	58.6
	Black	1079	34.6
	Other	211	6.8
EFC	Did not apply	227	7.3
	Max FA received	1098	35.3
	Some aid, not max	825	26.4
	Not eligible FA	964	31
FA Type Combinations	No aid	480	15.4
	Pell	395	12.7
	Loans	406	13.1
	HOPE	294	9.4
	Pell and loans	819	26.3
	Pell and HOPE	355	11.4
	Loans and HOPE	150	4.8
	All aid types	215	6.9

*Note.* FA = Financial Aid

### Findings

Initially, this researcher tested for all possible two-way interactions among factors or categorical variables and none were significant at the .01 level. The reader should note that all data elements within the analysis realized the critical mass 160 for the study with the exception of the loans and HOPE group at 150. The researcher determined the difference would not dramatically impact the results of the study and sample size for all groups sufficient. Reflected in the data, the researcher discerned the following facts. Of the 3,114 total participants identified in the sample 1,844 of the participants, or 59%, were female. The remaining 41%, or 1270 participants, were male. A total of 1,824 of the participants were White representing a majority of the sample at 59%. A total of 1,079 of the participants were Black at 35%. The remaining

“other” segment of the sample of 211 subjects represented 6% of the total sample size. EFC for the analysis is reflected as follows: 227 within the sample did not apply for financial assistance or 7%, 1,098 received the maximum amount of financial assistance or 35%, 825 received some financial assistance but not the maximum amount of assistance for 26%, and the remaining 32% or 964 participants were not eligible for financial assistance. Concerning financial aid type combinations received by the student, 480 students in the sample or 15.4% received no financial assistance. A total of 294 students or 9.4% received HOPE. A total of 406 or 13.1% of the students in the sample received loans. A total of 150 students, 4.8% of those selected for the sample, received loans and HOPE. A total of 395 students received Pell representing 12.7% of the students selected. A total of 355 students received Pell and HOPE which represented 11.4% of the sample. The largest group within the sample were students who received both Pell and Loans. They represented 819 or 26.3% of the students in the sample. A total of 215 students received all three forms of financial assistance and represented 6.9% of the sample.

The ANCOVA results presented in Table 7 show that all model predictors were statistically associated with collegiate GPA at the .01 level of significance. This finding indicates that mean differences in collegiate GPA can be found by sex, ethnicity, EFC, and financial aid type combinations. High school GPA, the covariate, was also a significant predictor of collegiate GPA.

Table 7

*ANCOVA Results and Descriptive Stats for Collegiate GPA by Sex, Ethnicity, EFC, and Aid*

*Type*

Predictors		Collegiate GPA			
		Observed Mean	Adjusted Mean	SD	n
Sex	Female	2.51	2.48	.95	1844
	Male	2.23	2.30	1.03	1270
Ethnicity	White	2.61	2.53	.92	1824
	Black	2.03	2.20	.98	1079
	Other	2.39	2.43	1.03	211
EFC	No App	2.32	2.32	.95	227
	Max Aid	2.21	2.30	1.01	1098
	Some Aid	2.40	2.38	.98	825
	Not Eligible	2.63	2.55	.93	964
FA Comb	No Aid	2.45	2.44	.94	480
	HOPE	3.12	2.56	.65	294
	Loans	2.17	2.11	.95	406
	Loans/HOPE	2.87	2.39	.79	150
	Pell	2.19	2.32	1.00	395
	Pell/HOPE	2.87	2.56	.78	355
	Pell/Loans	1.95	2.20	.98	819
	All Aid Types	2.67	2.52	.87	215

Source	SS	df	MS	F	Sig.
Sex	22.72	1	22.72	30.51*	.000
Ethnicity	51.12	2	25.56	34.33*	.000
EFC	10.60	3	3.54	4.75*	.003
FA Combinations	51.67	7	7.38	9.91*	.000
High school GPA	125.57	1	125.57	168.65*	.000
Error	2314.06	3103	.746		

*Note.*  $R^2 = .243$ ,  $Adj. R^2 = .239$ , adjustments based on High School GPA mean = 2.82.

\* $p < .01$

Table 8 displays a comparison of the mean differences in collegiate GPA by sex, ethnicity, EFC, and aid type.

Table 8

*Multiple Comparisons and Mean Differences in Collegiate GPA by Sex, Ethnicity, EFC, and Aid**Type*

Variable	Comparison	Mean Difference	s.e.	99% CI
Sex	Female vs. Male	.179*	.032	.096, .263
Ethnicity	White vs. Black	.323*	.039	.208, .437
	White vs. Other	.095	.063	-.091, .281
	Black vs. Other	-.228*	.067	-.423, -.032
EFC	No App vs. Max Aid	.017	.105	-.312, .346
	No App vs. Some Aid	-.059	.100	-.375, .256
	No App vs. Not Eligible	-.231	.082	-.488, .026
	Max Aid vs. Some Aid	-.077	.041	-.207, .053
	Max Aid vs. Not Eligible	-.248	.087	-.521, .024
FA Combs	Some Aid vs. Not Eligible	-.172	.081	-.425, .082
	No Aid vs. HOPE	-.125	.080	-.409, .159
	No Aid vs. Loans	.329*	.071	.075, .583
	No Aid vs. Loans/HOPE	.043	.093	-.289, .374
	No Aid vs. Pell	.115	.093	-.218, .448
	No Aid vs. Pell/HOPE	-.123	.098	-.472, .227
	No Aid vs. Pell/Loans	.239	.090	-.081, .559
	No Aid vs. All	-.081	.104	-.454, .293
	HOPE vs. Loans	.454*	.074	.191, .718
	HOPE vs. Loans/HOPE	.168	.087	-.143, .479
	HOPE vs. Pell	.240	.102	-.125, .605
	HOPE vs. Pell/HOPE	.002	.099	-.351, .355
	HOPE vs. Pell/Loans	.364*	.099	.009, .719
	HOPE vs. All	.044	.107	-.337, .426
	Loans vs. Loans/HOPE	-.286	.087	-.596, .023
	Loans vs. Pell	-.214	.097	-.562, .133
	Loans vs. Pell/HOPE	-.452*	.103	-.820, -.084
	Loans vs. Pell/Loans	-.090	.093	-.422, .242
	Loans vs. All	-.410*	.108	-.797, -.022
	Loans/HOPE vs. Pell	.072	.114	-.336, .480
	Loans/HOPE vs. Pell/HOPE	-.166	.113	-.568, .236
	Loans/HOPE vs. Pell/Loans	.196	.111	-.201, .593
	Loans/HOPE vs. All	-.124	.119	-.548, .301
	Pell vs. Pell/HOPE	-.238	.069	-.485, .010
	Pell vs. Pell/Loans	.124	.054	-.068, .317
	Pell vs. All	-.195	.077	-.471, .080
	Pell/HOPE vs. Pell/Loans	.362*	.064	.133, .590
	Pell/HOPE vs. All	.042	.075	-.227, .312
Pell/Loans vs. All	-.320*	.071	-.573, -.067	

*Note.* Comparisons based upon ANCOVA adjusted means controlling for high school GPA mean of 2.82. No App = no application made for financial aid, Max Aid = maximum amount allowable aid received, Not Eligible = applicant applied for but not eligible to receive aid due to value of earned family contribution (EFC) determination, Not Rec'd = student did not receive this type of financial assistance, and Rec'd = student received this type of financial assistance. Bonferroni adjustment was used for comparison purposes among ethnicity, EFC, and FA Combs.

According to the Table of Multiple Comparisons, Table 8, sex realized a statistically significant comparison as Female outperformed Male. For the ethnicity variable, White vs. Black and Black vs. Other was statistically significant with White outperforming Black and Other outperforming Black. For EFC, no statistically significant comparisons were found. Concerning aid type, No Aid vs. Loans, HOPE vs. Loans, HOPE vs. Pell/Loans, Loans vs. Pell/HOPE, Loans vs. All, Pell/HOPE vs. Pell/Loans, and Pell/Loans vs. All were all statistically significant at the .01 significance level.

To reiterate, the primary research question this investigation desired to answer was “What is the relationship between financial aid type and academic success in a public two-year college in Georgia?” Referring to Table 7, a difference in collegiate GPA exists by financial aid type received by the student. The financial aid type combinations reflected in the ANCOVA analysis are represented by “No Aid,” HOPE, Loans, Loans/HOPE, Pell, Pell/HOPE, Pell/Loans, and All Aid Types. The results of the analysis are reflected in Table 9 below representing observed and adjusted means for students receiving different types of financial aid combinations.

Table 9

*Observed and Adjusted Means for Financial Aid Type Combinations*

		Observed Mean	Adjusted Mean	SD	n
FA Comb	No Aid	2.45	2.44	.94	480
	HOPE	3.12	2.56	.65	294
	Loans	2.17	2.11	.95	406
	Loans/HOPE	2.87	2.39	.79	150
	Pell	2.19	2.32	1.00	395
	Pell/HOPE	2.87	2.56	.78	355
	Pell/Loans	1.95	2.20	.98	819
	All Aid Types	2.67	2.52	.87	215

This information is a subset of the data provided in Table 7 above presented to highlight the information specific to financial aid type combinations. The ANCOVA F-ratio of 9.91 was statistically significant at the .01 significance level. The pairwise comparison information for the financial aid type combinations is reflected in Table 10 presented as a subset of Table 8 illustrating the mean difference in comparisons between the recipients of the different aid type combinations to highlight the data for the reader.

Table 10

*Pairwise Comparison of Financial Aid Type Combinations*

Variable	Comparison	Mean Difference	s.e.	99% CI
FA Combs	No Aid vs. HOPE	-.125	.080	-.409, .159
	No Aid vs. Loans	.329*	.071	.075, .583
	No Aid vs. Loans/HOPE	.043	.093	-.289, .374
	No Aid vs. Pell	.115	.093	-.218, .448
	No Aid vs. Pell/HOPE	-.123	.098	-.472, .227
	No Aid vs. Pell/Loans	.239	.090	-.081, .559
	No Aid vs. All	-.081	.104	-.454, .293
	HOPE vs. Loans	.454*	.074	.191, .718
	HOPE vs. Loans/HOPE	.168	.087	-.143, .479
	HOPE vs. Pell	.240	.102	-.125, .605
	HOPE vs. Pell/HOPE	.002	.099	-.351, .355
	HOPE vs. Pell/Loans	.364*	.099	.009, .719
	HOPE vs. All	.044	.107	-.337, .426
	Loans vs. Loans/HOPE	-.286	.087	-.596, .023
	Loans vs. Pell	-.214	.097	-.562, .133
	Loans vs. Pell/HOPE	-.452*	.103	-.820, -.084
	Loans vs. Pell/Loans	-.090	.093	-.422, .242
	Loans vs. All	-.410*	.108	-.797, -.022
	Loans/HOPE vs. Pell	.072	.114	-.336, .480
	Loans/HOPE vs. Pell/HOPE	-.166	.113	-.568, .236
	Loans/HOPE vs. Pell/Loans	.196	.111	-.201, .593
	Loans/HOPE vs. All	-.124	.119	-.548, .301
	Pell vs. Pell/HOPE	-.238	.069	-.485, .010
	Pell vs. Pell/Loans	.124	.054	-.068, .317
	Pell vs. All	-.195	.077	-.471, .080
	Pell/HOPE vs. Pell/Loans	.362*	.064	.133, .590
	Pell/HOPE vs. All	.042	.075	-.227, .312
	Pell/Loans vs. All	-.320*	.071	-.573, -.067

As depicted in Table 10, there were seven comparisons showing significant differences with students receiving loans either singularly or in combination with other aid types registering lower GPA's. GPA is reflective of academic performance in the sample courses. The higher the GPA,



the indication is the better the performance of the students in the group. Conversely, the lower the GPA the poorer the student has been determined to have performed based on the GPA.

In response to sub-question one, “Do students who finance their higher education through student loans receive higher grades in foundational courses than students who finance their higher education through Pell Grants?” the results of the ANCOVA analysis show the comparison was not statistically significant at the .01 significance level using the Bonferroni correction. (See Table 10.) The conclusion drawn from the observation is that one cannot conclude the student group receiving loans outperformed the student group receiving Pell grant.

The researcher would point the reader to potential trends identified as a result of the study between observed versus the adjusted collegiate GPA between the two groups of students. The observed collegiate GPA for the student group receiving loans was 2.17 (N=406) and the adjusted collegiate GPA for the same group dropped to 2.11 (N=406) when adjusted for other predictors in the ANCOVA model. The student group receiving Pell grants realized a 2.19 (N=395) collegiate GPA and a adjusted collegiate GPA of 2.32 (N=395). When taking into consideration the model predictors and based on a predicted high school GPA of 2.82, the student group receiving loans performed at a lower rate 2.11 (N=406) than did the student group receiving Pell grants 2.32 (N=395) although this difference was not found to be statistically significant.

In response to the second sub-question, “Do students who receive merit-based financial assistance (i.e., HOPE scholarship) receive higher grades in foundational courses than students receiving need-based aid (i.e., Pell Grant)?” the results of the ANCOVA analysis reflect that the comparison was not statistically significant at the .01 significance level using the Bonferroni correction. The conclusion drawn from the observation is that no, with a mean difference of .240

one cannot conclude the student group receiving HOPE outperformed the student group receiving Pell grant.

The researcher would point the reader to potential trends identified as a result of the study between the disparity in the observed collegiate GPA between the two groups in the study. The observed collegiate GPA for the student group receiving HOPE was 3.12 (N=294) and the observed collegiate GPA for the Pell student group was 2.19 (N=395). However, when adjusted for the model predictors and a predicted high school GPA of 2.82, the student group receiving HOPE realized an adjusted collegiate GPA of 2.56 (N=294) and the group receiving Pell realized an adjusted collegiate GPA of 2.32 (N=395). After taking into consideration the model predictors of sex, ethnicity, EFC and FA combinations the difference in the predicted collegiate GPA for the student groups do not differ so dramatically.

In response to the third sub-question “Do students not receiving financial assistance receive better grades in foundational courses than students receiving some form of financial assistance?” the results of the ANCOVA analysis reflect that the comparison was not statistically significant at the .01 significance level using the Bonferroni correction. The conclusion drawn from the observation is that one cannot conclude the student group receiving “No Aid” outperformed the student group receiving HOPE.

The results of the ANCOVA analysis referring to the pairwise comparison in Table 10 between “No Aid” and Pell also reflect the comparison was not statistically significant at the .01 level using the Bonferroni correction. The conclusion drawn from the observation is that with a mean difference of .115 one cannot conclude the student group receiving “No Aid” outperformed the student group receiving Pell.

However, the results of the ANCOVA analysis do reflect that the comparison, “No Aid” vs. loans, was statistically significant at the .01 significance level using the Bonferroni correction. The conclusion drawn from the observation is that one can conclude the student group receiving “No Aid” outperformed the student group receiving loans, but the collegiate GPA’s were similar for those with “No Aid,” HOPE and Pell.

### **Summary**

Higher education costs of attendance continue to rise. Record numbers of students are availing themselves of the higher education opportunity. Increasingly students are availing themselves of financial assistance monies to subsidize the cost of attendance at higher educational institutions. The primary forms of financial assistance monies utilized in public two-year institutions in the state of Georgia are Pell Grant and loan monies provided by the Federal government, and HOPE monies provided by the state of Georgia. Effort was given by this researcher to investigate the relationship of these financial assistance type monies to the academic success of students in foundational courses in a public two-year institution in the state of Georgia.

The researcher identified a set of foundational courses at the institution that all students must take in completion of the two-year degree. Course grades were collected for these foundational courses and a collegiate GPA was calculated based on the results of these grades. Additionally, the researcher took into consideration other possible predictive factors that may have an effect on the academic success of the student in these foundational courses (e.g., sex, ethnicity, socioeconomic status, and type of financial assistance received). The aptitude for success of the student out of high school was also considered through the determination of a high school GPA based on a common set of courses taken at the K-12 level.

Data were collected for a five year period from fall of 2006 through spring of 2011. A total of 3,114 records were analyzed for the purposes of the study. Of the 3,114 records analyzed, 59% were female and 41% male. A total of 59% were White, 35% were Black and the remaining 6% were collectively grouped and compared as a category consisting of “other” ethnicities. A total of 7% of the sample did not apply for financial assistance of any type. A total of 35% received the maximum amount of financial assistance available. A total of 26% received some financial assistance. The remaining 32% applied for financial assistance, but were not eligible to receive it. Concerning financial aid type combinations 15.5% received No Aid, 12.7% received Pell, 13.1% received loans, 9.4% received HOPE, 26.3% received Pell and loans which was by far the largest student group receiving a similar aid type, 11.4% received Pell and HOPE, 4.8% received Loans and HOPE, and 6.9% received all aid types.

An ANCOVA statistical analysis was performed on the data. All of the five predictors (i.e., sex, ethnicity, EFC, FA combinations, and HS GPA) were determined to be statistically significant at a .01 significance level.

Based on the information provided from the multiple comparison information, there were ten statistically significant comparison samples. The female sample had a statistically significant mean difference over the male sample. Likewise, the student sample including White had a statistically significant difference over the Black sample group. None of the comparisons related to socioeconomic status, or EFC, was statistically significant. The sample student groups involving those recipients of loans, singularly or in combination with some other aid type, realized statistically significant mean differences in seven different comparisons involving other types of aid or “No Aid”.

An interpretation and discussion of these findings will be illustrated in Chapter V along with recommendations for potential future study of the topic in other analysis.

## **CHAPTER V**

### **SUMMARY AND CONCLUSIONS**

#### **Introduction**

The purpose of this study was to investigate the relationship between financial aid type and academic success in a public two-year institution in the state of Georgia. Financial assistance contributes significantly to higher education in the form of subsidy to the participants in higher education through student financial aid. According to the U.S. Department of Education (2010), for the 2009-2010 aid year the federal government provided 90 billion dollars in financial assistance to students seeking higher education in the United States. Much of the research available on this topic is based on research done at the four-year institutional level. Less research was available specifically related to two-year institutions, and in particular those in Georgia. Research was not identified which investigates aid type and a potential relationship to academic success. This gap in the literature provided the opportunity for investigation into determining if a relationship exists between financial aid type and academic success in a public two-year college in Georgia.

This study sought to answer the following overarching question: What is the relationship between financial aid type and academic success in a public two-year college in Georgia? To answer this question it was necessary for the investigation to consider grades earned in coursework while in attendance at a higher educational institution and the type of financial assistance received by the student during this time. It was also necessary to consider factors such as any inclinations a student may have for a particular subject area, the academic skill level of the student upon entry into the higher educational setting, socioeconomic factors, sex, and ethnicity of the student.

Data currently exist that provided the basis for the historical study. Accordingly, the investigation utilized a quantitative approach with an ex post facto design. Specifically, this study compared course grades in specified courses among students who receive financial assistance from the following sources: 1) grants, 2) scholarships, 3) loans, and 4) students receiving no aid. The data used for evaluation are retained electronically by a public two-year college in the State of Georgia.

Data for a five year period beginning with the fall of 2006 formed the basis for this study. Included in the data retrieval was information concerning financial aid type, course prefix, course number, grade, high school grade point average (GPA), earned family contribution (EFC), sex, and ethnicity. The researcher determined foundational courses taken by all two-year college students in each of the three following divisions: humanities, social sciences, and math science. The courses selected were ENGL1101 English Composition, POLS1101 American Government, and MATH1111 College Algebra. Course grades were determined for each of these courses and all students in the study had to have completed these three courses for inclusion in the study. Based on the grade in each course, a collegiate GPA was calculated for each student. Possible predictive factors were analyzed for the purpose of the study including: sex, ethnicity, EFC, financial aid type combinations, and high school GPA. ANCOVA was used as the method to analyze and determine results of the data and findings for the study.

### **Discussion of Findings**

Effort was given by this researcher to investigate the relationship of financial assistance type monies to the academic success of students in foundational courses in a public two-year institution in the state of Georgia. A summary of the key findings of the study follows.

For the five variables of data, students groups were formed and analyzed to determine academic success based on sex, ethnicity, EFC, FA combinations, and HS GPA. All variables were determined to be statistically significant at a .01 significance level. The study concluded that when considering the dependent variable collegiate GPA and the relationship to the independent or predictor variables (e.g., sex, ethnicity, EFC, FA combinations, and HS GPA) there was a statistically significant relationship. The significance of the finding for readers of the study is that financial assistance type was determined to be related to academic performance.

Results also showed that mean differences exist in collegiate GPA based on aid type received with an F-ratio of 9.91 at the .01 significance level. The essence of the study was the determination of a relationship between financial aid type and academic success. The study established the existence of that relationship. From the table of multiple comparisons information (See Table 10.) concerning aid type, No Aid vs. Loans, HOPE vs. Loans, HOPE vs. Pell/Loans, Loans vs. Pell/HOPE, Loans vs. All, Pell/HOPE vs. Pell/Loans, and Pell/Loans vs. All were all statistically significant at the .01 significance level. The researcher will point out, however, these results do not establish causality nor do they allow generalization to all students receiving these sources of financial assistance at other institutions.

In addition, results of the study (see Table 10) indicated that student groups receiving loans consistently achieved academic success at a lower rate than did other categories of students based on the attainment of collegiate GPA as the measure of success. Of the seven statistically significant categories of students for the financial aid variable, all seven included the loan category of students either singularly or in combination with other aid types. In all seven of these comparisons the loan group realized less academic success based on the collegiate GPA comparison.



With regard to sub-question one (i.e., Do students who finance their higher education through student loans receive higher grades in foundational courses than students who finance their higher education through Pell Grants?), no statistically significant difference was observed. To address this question in the study, the researcher endeavored to consider the issue of restitution and academic performance of the collegiate student. Loans require repayment and Pell Grants do not. It was posited by the researcher the requirement to repay monies used in support of the higher educational experience may be positively related to the academic performance of the student. However, the study identified no statistically significant difference in the performance of the student receiving loans versus the student receiving Pell Grant monies.

With regard to sub-question two (i.e., Do students who receive merit-based financial assistance [i.e., HOPE scholarship] receive higher grades in foundational courses than students receiving need-based aid [i.e., Pell Grant]), likewise there was no statistically significant difference. Here the researcher attempted to address the issue of quality of student. It is considered that students receiving merit-based aid are inherently better qualified students than those receiving need-based aid due to the academic requirements generally required for receipt of merit-based aid. Results of the study indicate that after adjusting for the model predictors commonly recognized as being related to academic performance no statistically significant difference was identified in the academic performance for the student groups.

With regard to sub-question three (i.e., Do students not receiving financial assistance receive better grades in foundational courses than students receiving some form of financial assistance), several different comparisons were made. When comparing “No Aid” and HOPE, the comparison was not statistically significant at the .01 significance level based on a mean difference of .125 after adjusting for potential model predictors. While the observed difference

in the collegiate GPA are apparent, when control is given for other model predictors the student groups' performance is similar. The researcher would also like to point out that while the adjusted GPA is based on a high school GPA of 2.87, high school students with this GPA would not be eligible for the receipt of HOPE. "No Aid" and Pell were compared and, likewise, there was no statistically significant difference at the .01 significance level based on a mean difference of .115. "No Aid" and Loans were also compared, with results showing a statistically significant difference at the .01 significance level based on a mean difference of .329. However, the significance of the finding is that while the comparison of "No Aid" to loans was statistically significant the adjusted GPA between "No Aid", HOPE and Pell Grant student groups were very similar.

### **Alignment of Findings with Previous Research**

Much of the previous research on the relationship of financial aid type to academic success was conducted at four-year institutions. Research at the two-year level was not as easily identified. This study expanded the research at the two-year level. It also contributed to the professional literature on the basis that much of the research centered on the topic of progression and retention (Mendoza, Mendez & Malcolm, 2009). Investigation of the relationship of financial aid type to academic success expands on this research. In particular, previous research concerning HOPE scholarships (Goetz, Mimura, Desal, & Cude, 2008) is supported by the results of this study. In addition, Brock (2010) addressed the issue of the synonymous relationship between financial assistance and higher education, noting the size of the public's investment in student financial assistance for higher education. Moreover, Doyle and Delaney (2009) examined the relationship of the economy to decisions concerning application of public funding, especially as it pertains to progression and retention. This investigation will help

inform the discussion on the value of the type of aid to academic success. In summation, the results of this study indicate that student groups receiving loans performed at a lower level than other students groups.

### **Recommendations for Practice**

The study established a statistically significant relationship between all five characteristics of the student groups and collegiate GPA. The value of establishing the relationship between the demographic characteristics of the group for practice is that the institution may benefit in knowing academic performance may be anticipated based on group characteristic. Knowing upon admission that certain groups of student may perform academically in a certain way based on group characteristic would allow for allocation of additional resources to improve and enhance student academic success. Observable patterns may allow the institution to better prepare and anticipate for the application of resources to better serve these groups of students.

The researcher suggests the essence of the study was the establishment of a relationship between financial aid type and academic success. The study succeeded in establishing that fact. In the comparisons of student groups receiving different types of aid; (i.e. "No Aid" vs. Loans, HOPE vs. Loans, HOPE vs. Pell/loans, Loans vs. Pell/HOPE, Loans vs. All, Pell/HOPE vs. Pell/Loans, and Pell/Loans vs. All) all were determined to be statistically significant comparisons. The significance of the realization is that the type of financial aid received does have a potential influencing characteristic for academic success. A reoccurring theme in the findings as a result of the study was that students receiving loans, singularly or in combination with other types of aid, performed at a lower rate than other student groups receiving aid. Also, student groups receiving HOPE realized a higher rate of performance than student receiving

other forms of aid. Even when controlling for the potential higher capability of the student out of high school based on the GPA qualification criteria for HOPE of 3.0 high school GPA, the adjusted GPA information based on a high school GPA of 2.82 was still observably higher than for recipients of other forms of aid. The significance of the fact could benefit practice in several ways. Decisions concerning the authorization of funding different types of aid could be impacted from these results. Going back to the previous statement of restitution and meritorious award, student groups receiving loans performed in general at a lower rate than student groups receiving other forms of aid. Purely considering the ultimate goal in higher education of realizing successful completion of a higher educational program, greater value is realized through the funding of financial assistance through programs whose participation is based on meritorious criteria than through the support of the loan program with minimal participation criteria.

Concerning advancing the study of this particular topic, this researcher suggests the results of the study may have practical value for the State of Georgia legislature as in these financially constraining times, consideration may be given to the value of HOPE funding for future graduates. Also, the University System of Georgia may value the results for consideration in academic support initiatives. The value of observable patterns within the student group may allow for the preparation of support to groups who could be anticipated to have difficulty academically. Specifically for the institution on whose students the study was performed, a concentrated effort could address academic issues of incoming student groups in the hope of negating potential negative ramifications realized by the group as identified through the study.

For publication purposes, the researcher suggests that publications of higher education may be interested in the results of the study such as *Inside Higher Ed* and the *Chronicle of*

*Higher Education.* The publications serve a large group of interested readers in the topics pertaining to higher education. With the continuing attention given to financial aid and academic success these publications could benefit from publication of the results of the study in an effort to assist in informing their readers concerning this topic.

For presentation purposes, the study may find an audience among associational groups within Georgia such as the Regents Advisory Committee for Student Affairs (RACSA) and Georgia Association of Collegiate Registrars and Admissions Officers (GACRAO). All members within these associational groups are intricately involved in the pursuit and success of the higher educational experience for Georgia students.

### **Limitations**

One limitation of the study is that it was foundational in its application. More study is warranted on the topic to include other elements which may confirm or deny the initial results of this study. The site for the study, a small two-year public college in Georgia, may contribute to other apparent limitations due to the size and geographic location of the institution. The fact that the subject school was a two-year institution accounts for some limitations of the study where graduation rates and admission standards are typically lower and potentially impact the results of the study. Other characteristics which were not included in the study such as age and admission qualification of the student may also impact the results of the study.

### **Recommendations for Further Research**

Recommendations for future research include expanding the scope of the study. This researcher suggests that more research could be performed at other two-year institutions in other geographic locations within the state. This could also include institutions of different types such as state universities, regional universities, and research universities. The expansion of the scope

across institutional type would consider institutions whose primary mission is providing the four-year degree track. Additionally, the research could be expanded to include private institutions. Consideration could be given for the historically black colleges in comparison to institutions with more ethnic diversity. The mission of the institution, liberal arts vs. technology, could be studied independently. Additional characteristics of the student groups could be considered such as age, geographic location, and admission standards. Nationally, the study could be expanded to include other states and populations of students from other parts of the country and comparisons made.

### **Concluding Thoughts**

Previous research suggests that certain variables are related to academic success at higher education institutions. Sex, ethnicity, EFC and high school GPA were all supposed or identified through research to be related to academic success. The results of this study confirmed that these factors are indeed related to academic success at the institution identified for the purposes of the study.

Central to the study was the attempt to establish the relationship between financial aid type and academic success. Again, it was anticipated by the researcher that students receiving HOPE or meritorious financial assistance would out-perform other groups of students receiving other types of aid. While the study did indeed establish the relationship, it was of particular interest that when taking into consideration possible predictive characteristics of the student group such as ethnicity and sex, the perceived notion of superior performance was somewhat dispelled as the student groups performed similarly. It was also interesting to note that, while observed differences in GPA appeared significant, they were not statistically significant when ANCOVA was performed.

In relation to the sub-questions, the researcher attempted to gain additional insight into the relationship of financial aid type to academic success considering restitution vs. grant monies, need-based vs. merit-based aid, and no aid vs. aid. Interestingly, none of these proved statistically significant. The researcher was left to assume, based on the results of this study, that an obligation to repay financial assistance monies is not related to academic performance. Students that received financial assistance monies that did not require repayment performed similarly to students who received money knowing that it would have to be repaid. Likewise, and surprisingly for this researcher, in the comparison of the student who received financial assistance based on the criteria of meritorious qualification vs. the student who received financial assistance on the basis of need, the comparison was determined not to be statistically significant. Equally as surprising was the obvious disparity in the observed GPA of the merit-based student group in comparison to the observed GPA of the need-based student group. And finally, in investigation of differences between student groups who received no aid vs. those that received some aid, again the comparison was determined not to be statistically significant. The one comparison, “No Aid vs. Loans”, was determined to be statistically significant, but based on the adjusted GPA of the groups “No Aid”, HOPE, and Pell Grant the GPA’s for the groups were similar.

Beyond the identified investigative questions for the study, the researcher observed several patterns in the results of the findings. HOPE student groups performed at a higher level as a single source of financial assistance or in combination with other types than did student groups receiving other types of aid. Student groups receiving Loans, conversely, performed at a lower rate. Particularly for this researcher, the implication for the student group receiving Loans was of particular interest. It was assumed by this researcher that student groups receiving loans

would respond to the fact they would be required at some point to repay the financial assistance monies received for pursuit of their education. The findings from the study would disprove this assumption.

Also of particular interest to this researcher, were the obvious differences in GPA information which were realized from the study, but failed to be identified as statistically significant for the purposes of ANCOVA. When considering the observed GPA of the student group, the HOPE student group out-performed other student groups with a collegiate GPA of 3.12 (N=294). The second best performance of a student group was Loans/HOPE at 2.87 (N=150) and Pell/HOPE 2.87 (N=355). The third group with the best academic performance based on observed GPA was the student group that received “All Aid Types” with a 2.67 collegiate GPA (N=215). The fourth group were the student group “Not Eligible” based on EFC with a 2.63 (N=964). Based on these observations, you have within the top four student groups those receiving aid for meritorious award in the top two, the student group receiving all forms of financial assistance and the student group who based on socioeconomic status was not eligible to receive financial assistance. That for the researcher was deemed to be a fairly unexpected and diverse dispersion of academic performance based on student group characteristic.

The researcher also considered only the financial aid type received based on observed GPA. If you look at the eight combinations of financial aid type in the study, Table 11 illustrates the Observed Mean GPA of the student groups based on financial aid type received in descending order.



Table 11

*Observed Mean GPA Based on Financial Aid Type Received*

Aid Type	Observed GPA	n
HOPE	3.12	294
Loans/HOPE	2.87	150
Pell/HOPE	2.87	355
All Aid Types	2.67	215
No Aid	2.45	480
Pell	2.19	395
Loans	2.17	406
Pell/Loans	1.95	819

The observation from the information above reflects the student group receiving the meritorious type financial assistance HOPE ranks in the top three based on observed GPA of all combinations of aid types. Four and five are respectively, student groups receiving all forms of aid and the student group receiving “No Aid”. Pell, Loans and a combination of the two for these student groups performed at the lowest rate six through eight. The surprising aspect of the information for this researcher is the student group that received all forms of financial assistance. Whereas the meritorious award group achieved at a higher rate and Pell and Loans at the lowest rate, the group that received all three forms of aid was in the middle of achievement scale. This is probably due to the receipt and or inclusion of the HOPE student group.

Practical consideration of the results of the study will add value to the efforts of the researcher in his chosen profession through the consideration of the relationship of these characteristics to the student group’s academic performance. While the researcher was most interested in the relationship between types of financial aid and academic success from a public policy perspective, the results point to implications for decisions regarding academic support to students, especially in connection with the Complete College Georgia initiative. With the

scrutiny placed on higher education to realize more positive results for academic performance and progression through to graduation, studies such as this one might aid higher education in providing a better understanding of student characteristics and academic success and how they may be related to one another.

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