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Academic Performance of Students Who Receive Need-based Financial Aid

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ACADEMIC PERFORMANCE OF
STUDENTS WHO RECEIVE NEED-BASED FINANCIAL AID

A Research Paper Presented to the
Graduate Faculty of the Department of
Occupational and Technical Studies at
Old Dominion University

In Partial Fulfillment of the
Requirements for the Master of
Science in Education Degree

By
Corey W. Carlson
December 2006

APPROVAL PAGE

This research paper was prepared by Corey W. Carlson under the direction of Dr. John Ritz. It was submitted to the Graduate Program Director as partial fulfillment of the requirements for the Degree of Master of Science in Education.

APPROVAL BY: _____ DATE: _____

Dr. John M. Ritz,
Advisor and Graduate
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TABLE OF CONTENTS

	Page
Approval Page	ii
Acknowledgements	iii
List of Tables	v
I. INTRODUCTION	1
Statement of the Problem	1
Research Goals	1
Background and Significance	2
Limitations	3
Assumptions	3
Procedures	4
Definition of Terms	4
Overview of Chapters	5
II. REVIEW OF LITERATURE	6
Satisfactory Academic Progress	7
Financial Need	8
National Interest	8
Summary	9
III. METHODS AND PROCEDURES	11
Population	11
Research Variables	12
Methods of Data Collection	12
Statistical Analysis	12
Summary	12
IV. FINDINGS	14
Results	14
Summary	14
V. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	16
Summary	16
Conclusions	17
Recommendations	18
References	20

LIST OF TABLES

		Page
TABLE I	Academic Performance (Determined by GPA) of Need-Based Aid Recipients compared to Non-Need-Based Aid Recipients	15

CHAPTER I INTRODUCTION

As educational opportunity advances, legislators and administrators continually passover the issue of accountability to those whom receive federal funds. One such issue is whether students who receive federally funded need-based financial aid academically perform above, the same, or below those students who do not receive aid. With the Higher Education Act of 1965 (HEA) continually being reassessed and reauthorized, legislators need to be cognizant that the monies being allotted towards such programs are beneficial or whether the monies could be better spent elsewhere. Research shows that students with higher socioeconomic status tend to perform at a higher academic level than those of lower socioeconomic status (McNair & Taylor, 1988). Thus, this researcher sought to find empirical evidence that lower socioeconomic students, those who are eligible for the most need-based aid, typically perform academically lower than higher socioeconomic students.

Statement of the Problem

The purpose of this study was to determine the overall academic achievement of students who receive need-based financial aid compared to students who do not receive need-based financial aid (institutional, private, federal, or state).

Research Goals

To guide this research, the following hypothesis was established:

H₁: There is a positive difference in academic grade point average for students who receive need-based financial aid compared to those who do not receive need-based financial aid.

Background and Significance

Higher education has become more attainable within the last half century due to legislative actions such as the Servicemen's Readjustment Act of 1944 (Unrestricted. (NWCTB-11-LAWS-PI159E6-PL78(346)) signed by President F.D. Roosevelt and the Higher Education Act of 1965 [(HEA) Public Law 89-329, 79 STAT 1219, reauthorized in 1968, 1972, 1976, 1980, 1986, 1992, and 1998] originally signed by President Lyndon Johnson.

With higher education within the grasp of more than just the higher and upper-middle classes, evident by the continual increase of enrollment at post-secondary institutions at nearly an average rate of 15% (National Center for Education Statistics, para. 1. 2006), one is inclined to question whether there is an academic achievement divide among these polar socioeconomic classes? Lower socioeconomic students are typically eligible for substantially larger amounts of grants and other need-based aid while upper-middle class and higher class students tend to be ineligible for need-based aid altogether. While research has shown (McPherson & Shapiro, 1998; Profile of Undergraduates in U.S. Postsecondary Education Institutions: 2003-04, 2006), lower socioeconomic class students attend two-year institutions with greater frequency than 4-year institutions, there is little to no evidence that suggests the financial aid these students are receiving is resulting in academic achievement.

With so many taxpayer dollars at risk, an average of \$7,304 per full-time student per full academic year (National Center for Education Statistics. 2005), it is surprising that no one has asked the question of whether this funding is being put to good use. With continual legislative action being taken to increase the amount of students capable of

attending higher education, it is the benefit of us all to determine whether there is indeed an academic significance between non-aid recipients and need-based aid recipients.

Limitations

This study was conducted with, and cognizant of, the following limitations:

1. The population of this study are community college students and are enrolled in either their first or second year of higher education.
2. Full-time enrollment at Yavapai College averages around 1476 students.

Assumptions

The results of this study were based on the following assumptions:

1. All participants of this study within the control group did not receive any reported type of need-based financial aid.
2. Students completed their FAFSA correctly or their applications were verified and corrected by the financial aid office in order to determine who is financially in need of student aid.
3. Some form of funding is necessary for students to enroll in community college academic programs.

Procedures

The researcher met with the director of financial aid at Yavapai College in order to collect academic data. Through the help of the Financial Aid Office and the Office of Institutional Research, this researcher was able to retrieve several data sets from their

software which was able to limit and sort students based on their status (e.g., full-time, freshman, sophomore, etc.). Once a list of financial aid recipients who met the specified criteria has been collected, a search within the registrar's database was conducted to determine each student's cumulative GPA. Then, an average was calculated out of the financial aid recipients' combined GPA. The combined GPA was then calculated among non-aid recipients. These two averages were then compared to determine whether there was any significance if a student receives need-based financial aid or does not on their academic grade point average.

Definition of Terms

The following terms are defined to assist the reader:

Need-Based Aid – Financial aid that is disbursed to students who show a significant amount of need as determined by the Federal Methodology of the FAFSA.

Need – Difference between the Cost of Attendance and a student's resources.

Cost of Attendance (COA) – Amount that an IHE determines that it would cost to attend school for a specified time. Usually given in semester and academic year budgets.

FAFSA – Free Application for Federal Student Aid. Application that students complete in order to determine their eligibility for federally-based aid.

Grade Point Average (GPA) – An average of a student's grades. Usually implemented in a 4.0 scale.

Academic Achievement – A significant step above the average GPA.

Award Year – The academic year that financial aid is received.

Overview of Chapters

The purpose of this study was to determine the overall academic achievement, as evident through GPA, of students who receive need-based financial aid compared to students who do not receive any need-based financial aid (institutional, private, federal, or state). Chapter II will provide a review of literature as a foundation for investigating this topic as well as providing knowledge gaps within this area of higher educational funding. Chapter III will discuss the methods and procedures this researcher employed in retrieving the appropriate data and the instrument(s) employed. Chapter IV will present the findings of this study and how they may be interpreted. Finally, Chapter V presents the findings of this study and will summarize the conclusions assessed by this researcher along with recommendations for further and continued research.

CHAPTER II REVIEW OF LITERATURE

Higher educational funding has played a crucial element in the current success of the United States and according to Senator Gregg, Chairman of the Committee on Health, Education, Labor, and Pensions of the 108th Congress , “... is key to the competitiveness of our Nation” (Promoting Access to Postsecondary Education, 2003). “Under title IV of the Higher Education Act of 1965, as amended (HEA), the federal government annually spends billions of dollars on various grant and loan programs to assist students seeking postsecondary education and training” (United States General Accounting Office, 1997).

While college accessibility is the “foundation” of the HEA, according to Howard McKeon, Chairman of the Subcommittee on the 21st Century Competitiveness of the 108th Congress (2003), there is little to no accountability measures established within the legislation for higher educational funding. While researchers like Hauptman (2005) have brought up the subject of academic achievement and its relation to federal financial aid, the research overlooks accountability and then goes on to mention what is already in focus among legislators such as accessibility and award levels. Nichols (1980) attempted to determine whether there is a relationship between financial aid and academic achievement along with whether there is a relationship between socioeconomic status and academic achievement, although the research came up short and is far out-dated. Research by Jones & Moss (1994) have shown there is a significant difference in academic achievement between need-based aid recipients and no-need students, although the population studied was that of medical students and is not necessarily generalizable to undergraduate students. Other research exists, such as Ostberg (1982), although the population and time periods are, again, not generalizable to all undergraduates today.

Some authorities within the field have called for standardized testing as a form of accountability similar to the measure implemented within the No Child Left Behind Act, although their ideas have come with little interest and/or backing (Dervarics, 2006).

There are no gaps in the premise that the HEA promotes accessibility to higher education and builds opportunity for the nation as countless studies support this assertion such as GAO/HEHS-95-48 (1995). This said, educational and legislative authorities continue to push this premise of accessibility (Merisotis, 2003). This chapter will discuss measures of accountability such as satisfactory academic progress and financial need, and how this impacts us in the United States.

Satisfactory Academic Progress

The current state of American higher educational funding lacks appropriate accountability which is evident within the legislation and apparent in the miniscule number of scholars who have presented options for providing academic accountability. The sole reference to academic accountability within the HEA states that a student must maintain “satisfactory academic progress” within her/his degree path. Satisfactory academic progress is a rather subjective measure as each institution establishes its institutions satisfactory academic progress through the policies and procedures (Title 34 - Education, 2001). This one method is simply not enough to convince educators and legislators alike that federal funds are being spent with only minimal accountable measures in place. What minimal measures that are indeed in place within the legislation are still contested (McNair & Taylor, 1988) as to whether they are appropriate indicators of academic progress or whether they bias those very people who they are in fact trying to help.

Financial Need

When considering which students are deemed needy, thus eligible for federal subsidizing, the Department of Education established the Federal Methodology (FM). The FM is a complicated formula which takes many characteristics into consideration such as a student's age, marital status, dependency status, income, assets, and number of members within the household. From this formula, the Department of Education determines a student's Expected Family Contribution (EFC). The EFC is the result of the formula which is then subtracted from an institution's Cost of Attendance (COA) which will determine a student's need (The EFC Formula, 2005-2006). The need is then compared to federal and institutional charts that will then determine how much aid a student will, or is eligible to, receive.

National Interest

The number of full-time students receiving federal financial aid has steadily increased through the last 15 years (National Center for Education Statistics, 2005), from nearly 36 percent of students in 1992-93 to 49 percent in 2003-04. Minority groups along with important legislators are pushing for increased funding to lower-income students with some calling for a doubling in authorized levels (Burd, 2003). There is strong evidence that shows lower income students have significantly lower persistence rates when they are compared to middle and higher income students (National Center for Education Statistics, 2000). One factor that research has shown to have an adverse affect on retention rates is the amount that students worked while concurrently attending higher education (National Center for Education Statistics, 1999). Working may be one causal factor that can help explain lower academic achievement in lower-income students

although this might account for why enrollment rates for lower-income students are not comparable to those of higher-income students. If employment is a necessary means to exist, then less attention can be paid elsewhere, such as education, thus preventing those from lower socioeconomic status opportunity to rise out of that condition.

Another aspect that may have bearing on lower-income students not achieving well might be that nearly a quarter of all academically qualified students with lower-income simply do not even apply to higher education (Gardner, 2005). Those lower-income students who do attend higher education typically attend 4-year colleges at only half of the rate of their higher-income counterparts and attend 2-year colleges at rates six times higher than higher-income students (Burd, 2001). Roughly 10% of lower-income students by the age of 24 successfully complete a bachelor's degree compared to 71% of higher-income students (Selingo & Brainard, 2006).

Summary

There is little to no current research that compares income to achievement levels within higher education. As well, there is little to no research that focuses on federal aid and the accountability in which it is disbursed as financial aid to students. While accountability has seen little discussion among policy makers and researchers, accessibility remains the sole focus. Legislators and educators have spent a great deal of focus on the issue of accessibility to higher education by means of subsidizing the costs for lower-income students but they have failed to set up measures of accountability which would provide evidence that the money is being spent appropriately and is being put to good use.

Chapter III will discuss the methods and procedures used in conducting this study. Along with the methods and procedures, an overview of the population and statistical analysis will be reviewed.

CHAPTER III METHODS AND PROCEDURES

This study was prepared using experimental research methods to compare full-time student's GPA to need-based aid recipient's GPA in order to determine academic achievement. This chapter discusses the population, research variables, instrument design, data collection, and the statistical analysis employed.

Population

The population for this study included all full-time students whom attended Yavapai Community College for the entire academic years of 2004-2005 and 2005-2006. During both years, full-time enrollment was approximated at about 1476 students. The sample size of the control group (population) was estimated to be 310. Approximately 46% of all full-time enrolled students within the academic years of 2004-2005 and 2005-2006 received need-based financial aid. The sample size of the experimental group (need-based aid recipients) was estimated to be 254.

Out of the 1476 students, 935 or 72.1% of the full-time students enrolled at Yavapai College for these time periods were considered traditional-aged students (18-25). A majority of all full-time students enrolled at Yavapai College do so in order to gain either an Associate's Degree, an occupational/technical certification, and/or transfer on to a university. This population serves this study well as this region has a wide spectrum of very high to very low socioeconomic representation that attend Yavapai College.

Research Variables

The independent variables were (1) students who receive need-based financial aid and (2) students who do not receive need-based financial aid. The dependent variable of this study was academic GPA.

Methods of Data Collection

The data collected for this study came in four sets. The first set included all full-time enrolled students from the 2004-2005 academic year that received need-based financial aid. The second set included all full-time enrolled students from the 2004-2005 academic year that did not receive need-based aid. The third set included all full-time enrolled students from the 2005-2006 academic year that received need-based financial aid. The fourth and last set included all full-time enrolled students from the 2005-2006 academic year that did not receive need-based aid. The need-based aid recipients from both years were grouped together and the mean GPA was taken from the sample size of this group. The same was done for the non-need-based aid recipients, where both years were grouped together and the mean GPA was taken from the sample size of this group.

Statistical Analysis

An independent t-test was used to determine whether the academic achievement (GPA) in need-based aid recipients (experimental group) deviated significantly from students who did not receive need-based aid (control group).

Summary

Chapter III discussed the methods and procedures employed in this study. The population of this study is that of the full-time enrolled students who attended Yavapai Community College for the length of the academic years of 2004-2005 and 2005-2006.

The experimental group consisted of full-time enrolled students who received need-based financial aid which was analyzed via an independent t-test to the control group which consisted of full-time enrolled students who did not received need-based financial aid. In Chapter IV, data will be analyzed. Also, the researcher will communicate the findings of this study.

CHAPTER IV FINDINGS

Chapter IV will present the data collected for this research study. The problem of this study was to determine whether students who receive need-based financial aid perform below or similar to students who do not receive need-based aid. Performance was measured by GPA.

Results

Through the statistical analysis of an independent t-test, need-based aid recipients had higher academic achievement ($\underline{M} = 3.08$, $\underline{SD} = .908$) than students who received no aid ($\underline{M} = 3.04$, $\underline{SD} = .963$). The t was calculated to be $-.467$ with a level of significance of $.641$ ($t(562) = .641$, $p > .05$). See Table I. These values confirm that there is no statistical difference in GPA between the control and experimental groups.

Summary

The findings were expounded in Chapter IV. Need-based financial aid recipients do not perform lower (measured by GPA) than students who receive no need-based aid, in fact, need-based aid recipients had higher academic achievement levels when compared to students who did not receive need-based aid. In Chapter V, the researcher will discuss the findings and make conclusions based on the findings. As well, the researcher will also summarize the study along with making recommendations for further research.

Table I. *Academic Performance (Determined by GPA) of Need-Based Aid Recipients compared to Non-Need-Based Aid Recipients*

Independent Variables	Standard Error Mean	Standard Deviation	Sample Size	Mean
Need-Based Aid Recipients (Experimental)	.055	.908	254	3.08
Non-Need-Based Aid Recipients (Control)	.057	.963	310	3.04

CHAPTER V SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

A summary of this research project will be presented to provide an overview of the stated problem, research goals, as well as, the methods and procedures used to meet those goals. The researcher will answer the research goal and draw conclusions based upon the data collected. The researcher will then offer recommendations based upon the results of this study for future research.

Summary

The purpose of this study was to determine the overall academic achievement of students who receive need-based financial aid compared to students who do not receive need-based financial aid (institutional, private, federal, or state). The research goal of this study was:

H₁: There is a positive difference in academic grade point average for students who receive need-based financial aid compared to those who do not receive need-based financial aid.

This study was conducted with the following limitations: (1) the population of this study are community college students and are enrolled in either their first or second year of higher education and (2) full-time enrollment at Yavapai College averages 1476 students annually.

Three assumptions were outlined in this research project: (1) all participants of this study within the control group did not receive any reported type of need-based financial aid, (2) students completed their FAFSA correctly or their applications were verified and corrected by the financial aid office in order to determine who is financially

in need of student aid, and (3) some form of funding is necessary for students to enroll in community college academic programs.

Data were successfully collected through the aid of the Financial Aid Office of Yavapai College along with the Office of Institutional Research at Yavapai College. Two samples were established from the population: (1) full-time, need-based aid recipients and (2) full-time, no need-based aid received. The mean GPA's were then analyzed using a t-test.

A review of literature was conducted by this researcher in order to determine whether similar research had been conducted before, and if so, how significant and recent is it in today's context? The review of literature highlighted this researcher's opinion that too little research had been conducted on aid recipient academic performance. Satisfactory Academic Progress and Financial Need were addressed as well in the review of literature.

Conclusions

The purpose of this study was achieved through the collection of data. The hypothesis was:

H₁: There is a positive difference in academic grade point average for students who receive need-based financial aid compared to those who do not receive need-based financial aid.

The mean GPA of need-based aid recipients was 3.08 while the mean GPA of non-need-based aid students was 3.04. The t was calculated to be -.467 with a level of significance of .641 ($t(562) = -.467, p > .05$). The hypothesis was rejected. There was no

significant difference between students that receive need-based aid in terms of academic performance (GPA) compared to students that do not receive need-based aid.

Recommendations

Based on the research conducted, this researcher recommends the following research studies within this area:

- An experimental study of academic performance between full-time need-based aid recipients compared to part-time need-based aid recipients.
- An experimental study of academic performance between full-time need-based aid recipients at 4-year institutions compared to full-time students who are not eligible for need-based aid.
- An experimental study of academic performance between merit-based aid recipients compared to need-based aid recipients.
- A legislative inquiry into the state of federal financial aid to make sure it is meeting the needs and requirements that it was originally intended.

It is also recommended that these research findings be discussed and replicated among other similar institutions to Yavapai College. If these results are replicable from school to school, we will know for sure that need-based financial aid does in fact afford lower income students the opportunity to attend higher education and that their academic performance rivals that of their higher socioeconomic cohort. The findings of this report will be submitted for review to various scholarly financial aid journals so that others will have the chance to review this researcher's methods and conduct similar studies if desired. It is the hope of this researcher that this study will encourage a discussion among financial aid administrators and legislators alike to build upon our system of higher

educational funding so that all students, regardless of their social or economic status, are given an opportunity to attend higher education and excel when they are there.

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