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The Relationship between Financial Literacy, Financial Status, and Academic Success in College Students

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THE RELATIONSHIP BETWEEN FINANCIAL LITERACY, FINANCIAL STATUS, AND ACADEMIC SUCCESS IN COLLEGE STUDENTS

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To my amazing wife, whose support and optimism have been a constant source of encouragement. In addition, to our children: Jonah, Liam, and Annalise, who fill our home with laughter, tears, chaos, and love.

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THE RELATIONSHIP BETWEEN FINANCIAL LITERACY, FINANCIAL STATUS, AND ACADEMIC SUCCESS IN COLLEGE STUDENTS

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As the cost of college continues to rise, an increasing number of students are relying on loans and credit cards to fund their postsecondary education. In an effort to curb student debt and increase retention and graduation rates, many universities have begun to offer financial literacy initiatives to stimulate financial knowledge and promote positive money management behaviors.

This study examines the relationship between a for-credit personal financial literacy course and student academic success and economic status. Students who took a personal finance course during their first or second year of college are compared to a random sampling of students who did not take the course. Using archival data, this quantitative study measures retention and graduation rates, college GPA, and loan amounts for between and within group differences.

Significant differences were found between the two groups on first- and second-year retention rates, four-year graduation rates, and final college GPA. Students who took the personal finance course were 11.7% more likely to return to the university after their first year of college as compared to those who did not take the course. Second-year retention rates also were higher for the finance course condition students (88%) as compared to non-finance course students (66%). Mean college GPA was significantly higher for finance course participants (3.24) at the end of their last semester of enrollment

(regardless of graduation status) as compared to non-finance course condition students (2.75). Four-year graduation rates also were higher for finance course students (30.4%) as compared to non-finance course students (22.6%). Between-group differences were not found in five- and six-year graduation rates, nor were significant differences found in final loan amounts.

The results from this study indicate the potential impact of a for-credit personal finance course on first- and second-year retention rates, four-year graduation rates, and final college GPA. In light of this research, postsecondary institutions eager to increase retention and graduation rates are encouraged to provide financial literacy courses and initiatives geared toward promoting positive money management behaviors among its student body.

CHAPTER I: INTRODUCTION

Purpose of the Study

As the cost of college continues to increase and family incomes remain relatively unchanged, students are evermore shouldered with economic burdens of postsecondary education. These students, in turn, are acquiring larger student and personal loans along with mounting credit card debt. This financial strain often produces a negative impact on the students' overall psychological, behavioral, and economic well-being. Subsequently, these negative effects brought about by financial strain impact college student retention and academic success. As a remedy to this situation, many universities have begun to provide financial literacy initiatives to educate and provide guidance concerning personal money management. These initiatives are commonly recognized on college campuses in the form of workshops, for-credit personal finance courses, online resources, and professional or peer-led money management counseling.

This study assesses the relationship of an undergraduate financial literacy course on student financial status (loan acquisition), retention, graduation rates, and grade point average (GPA). Utilizing matched controls, this project analyzes these differences between students who completed a college-level course in personal finance during their freshman or sophomore year to those who have not. Data from the university's offices of Institutional Research and Financial Assistance are examined to determine the relationship of a college-level personal finance literacy course upon student academic success and financial status.

Statement of the Problem

The rising cost of higher education has placed an increased financial burden upon college students and their families. The cost of college has outpaced the cost of living for the past three decades, making degree attainment a precarious financial investment for many (Lewin, 2008). Economic barriers continue to impede degree attainment, as financial aid has not kept pace with inflation and overall cost of college. An assessment of financial aid indicates a shift from making college affordable for all, to abating the cost for middle-class families (Long & Riley, 2007). The combination of increased educational expense and diminished financial aid has created a widening economic gap, increasing the net cost of postsecondary education. This widening financial gap is especially significant for first-generation, low-income, and minority individuals whose retention and graduation rates continue to lag far behind White and Asian students. While college attendance is at an all-time high, many are not progressing on to graduation due to financial barriers that impede their progress.

As the cost of college continues to rise and financial aid remains relatively unchanged, college students are finding other means to fund their education. Mean student loan amounts are increasing with every passing year (Wright, Hayes, & Serrato, 2015). While many of these students take out the maximum loan amount, some still fall short of the required cost of attendance and turn to private loans and credit cards to make up the difference. Data indicate the increased use of credit cards by college students as a way to fund their education (Sallie Mae, 2009). Upon graduation or dropping out of school, students are expected to begin paying back these loans within a relatively short period of time. Those who obtain a degree and secure employment fare better than

individuals who dropped out of college. While many college graduates are able to pay down their student loans over an extended period, they often postpone major purchases, retirement savings, marriage, or having children due to lingering debt (Elliot, Grinstein-Weiss, & Nam, 2013; Elliott & Lewis, 2015). For those who did not graduate but maintain student loan and credit card debt, their financial struggles often are amplified, leading many to delinquency and default.

Financial strain has been recognized as an impediment to academic success (Heckman, Lim, & Montalto, 2014; Joo, Grable, & Bagwell, 2003; Robb, Moody, & Abdel-Ghany, 2012). For many students, the emotional burdens of financial stress contribute to increased dropout rates and course load reduction. This reduction in course load leads to longer time in school. The longer it takes as students progress through required courses, the less likely they will persist on to graduation. Additionally, students with increased financial strain exhibit lower levels of self-efficacy and, in turn, have a lower GPA as compared to students who do not experience financial strain. Various studies have underscored the emotional and academic impact associated with financing a college education, particularly among students who experience financial strain.

Many first-year college students lack the basic financial knowledge necessary for making healthy financial decisions. First-year college students often are ignorant of basic money management skills and are ill-equipped to make major financial decisions concerning their education, yet are expected to do so prior to graduating from high school. Once in college, students must quickly navigate the responsibilities associated with maintaining a personal budget, obtaining financial aid, housing, student loans, credit card, insurance, and more. While some students may have been exposed to a financial

literacy course in high school, evidence suggests the majority have not (Council for Economic Education, 2016). Financial literacy within the K-12 education system is sporadic at best, with only a few states mandating money management courses. Moreover, previous studies have debated the impact of K-12 financial literacy courses in terms of gaining financial knowledge or subsequent positive financial behaviors. While some researchers have highlighted literacy gains, others have provided evidence to the contrary (Bernheim, Garrett, & Maki, 2001; Danes, Huddleston-Casas, & Boyce, 1999; Mandell & Klein, 2009; Peng, Bartholomae, Fox, & Cravener, 2007). Furthermore, researchers continue to debate an accurate measurement of financial literacy and struggle to agree upon a universal definition to encapsulate the term *financial literacy*.

Regardless of definitive terminology and agreed upon measurements to assess financial literacy, institutions of higher education recognize the importance of personal money management education as an important tool to increase retention and graduation rates. Many universities are disseminating financial information via a variety of delivery systems (Kezar & Yang, 2010). First-year experience courses and orientation workshops provide incoming students with pertinent information as they transition from high school to college. Additional workshops give students the opportunity to learn about specific financial topics that may be more relevant at specific times of the year, such as applying for financial aid and housing. Some universities offer web-based financial information as a means for students to access information at their convenience, while others offer more intrusive peer-based mentoring, providing students with individual counseling to address their specific needs. Last, some institutions offer for-credit, semester-long personal

financial literacy courses covering a wide breadth of information and objectives meant to prepare students for an economically sound future.

While many institutions of higher education are promoting financial literacy as an additional retention tool, few studies have researched the impact these initiatives have on student academic success and financial well-being. This study specifically investigates the relationship of a college-level financial literacy course taken during a student's freshman or sophomore year on GPA, retention rates, graduation rates, and financial status as measured by overall student debt.

Background of the Study

Research on financial literacy has expanded over the past couple of decades as scholars strive to understand the factors influencing personal money management cognition and behaviors. Establishing a conceptual definition of financial literacy has been a work in progress for many within the field starting as early as the 1900s (Jelley, 1958). Because financial literacy encompasses knowledge acquisition, money management behaviors, and tangible monetary outcomes; establishment of a comprehensive definition has been a persistent debate. This discussion continues as researchers attend to specific aspects of financial literacy and its impact on individual well-being throughout various points in the lifecycle.

Like other literacy efforts, early exposure to financial education has been promoted by a multitude of private and governmental organizations. Financial literacy starting as early as preschool through the elementary years is endorsed in both the home and school environments (Martin & Oliva, 2001). Some of these school-based curriculums have produced promising results, increasing children's understanding of

money and basic economic concepts (Grody, Grody, Kromann, & Sutliff, 2008; Hagedorn, Schug, & Suiter, 2012).

Instruction in financial matters varies by state and school district as students progress into their middle and high school years of education. Currently, only 17 states require some form of financial instruction, with only five of those requiring students to enroll in a semester-long finance course (Council for Economic Education, 2016). Researchers investigating the impact of young adult financial literacy education have reported mixed results. Studies by Mandell and Klien (2009), Peng et al. (2007), and Hathaway and Khatiwada (2008) have shown no improvement in overall student financial knowledge or improved financial behaviors after exposure to money management curriculums. However, other research (Danes et al., 1999; Varcoe, Martin, Devitto, & Go, 2005; Walstad, Rebeck, & MacDonald, 2010) has indicated marked improvement in financial knowledge and behaviors after exposure to personal finance course curriculum. Researchers postulate that timing of financial literacy instruction may play an important role in the retention of financial information. Teaching money management practices when youth are beginning employment or when personal finance become a tangible common-day practice may result in increased economic outcomes. Additionally, course curriculum and delivery mechanisms play an important role in retention of economic principles and implementation of healthy economic behaviors.

Upon graduation from high school, individuals encounter a multitude of financial decisions as they progress toward adulthood. This is especially true for those who enroll in postsecondary education. Navigating the pathways to fund a four-year degree can be a difficult task as students apply for scholarships, financial aid, and loans. With the

increasing cost of college, students are bearing this greater economic burden, with many struggling to understand the future economic impact of their decisions. Numerous studies have highlighted this lack of financial knowledge (Avard, Manton, English, & Walker, 2005; Chen & Volpe, 1998; Davies & Lea, 1995; Roberts & Jones, 2001), yet students are expected to make major financial decisions, which are likely to profoundly impact their future economic well-being.

Aware of these economic difficulties and dearth of personal money management skills and knowledge, universities have begun to offer financial education opportunities for their students by means of workshops, online resources, counseling, and course instruction. The research focused on these delivery systems has expanded over the past decade as concern grows in light of increased college expense. The majority of these studies (Borden, Lee, Seido, & Collins, 2008; Ehrich, Hansford, & Tennent, 2004; Seyedian & Yi, 2011) have focused on examining the impact of collegiate initiatives on financial knowledge acquisition and intended behavioral changes associated with personal money management. The effectiveness of these college-based programs is disputed among researchers in part due to the difficulty in measuring financial literacy outcomes. Increased knowledge of financial terms and products does not necessarily mean students will make wiser economic decisions. Many studies have found evidence to support financial education at the collegiate level. However, longitudinal data are lacking to assess the economic impact financial literacy initiatives have on both short-term and long-term economic well-being.

This study is unique in that it quantitatively examines the relationship of a college-level financial literacy course on academic outcomes and financial status.

Specifically, this study strives to observe academic and financial differences between students who enrolled in Personal Finance 161 during their first or second term of college in comparison to a randomized sample of students who did not enroll in the course. College GPA, retention rates, graduation rates, and student loan acquisition are examined for between-group differences. This research does not assess retention of financial terms or concepts as previous research has attempted to investigate, but examines specific academic and financial outcomes that may be affected by enrollment in a college-level personal finance course.

Guiding Research Questions

The following research questions are used to provide overall direction for this study. The first set of questions addresses student academic performance in relation to enrollment within a personal finance management course. The second question focuses on financial status, assessed by means of overall student debt. Finally, the third question addresses the relationship between a financial literacy course on graduation rates among four subgroups.

1. To what extent does taking a college-level financial literacy course during the freshman or sophomore year (compared to not taking the course) associate with improved academic outcomes as observed by:
    - Higher GPA at graduation?
    - Increased first-year and second-year retention rates?
    - Higher four-, five-, and six-year graduation rates?
2. To what extent does taking a college-level financial literacy course during the freshman or sophomore year (compared to not taking the course) associate with

improved financial status as observed by mean decreased loan acquisition at the last semester of attendance?

3. Are significant differences observed within subgroups who took a financial literacy course when accounting for socioeconomic status (Pell Grant vs. Non-Pell Grant recipients) and first-generation status vs. non-first-generation status students?

Participants

Participants for this project consist of undergraduate first-time, full-time students from a midsize public university in the Southcentral United States. Students who previously enrolled in Personal Finance 161 during their first two terms of college (freshman or sophomore years) are included within this study. Archival data were collected between the academic years 2008-2015 for a total of 24 semesters (including summer sessions). Using a simple random sampling procedure, students who did not take the personal finance course were selected to act as the control group from this same period of time.

Procedures

This study uses archival data provided by a university's offices of Institutional Research and Financial Assistance. The data being evaluated encompass an eight-year period (2008-2015) in which Personal Finance has been taught. All student records were de-identified in order to protect the privacy and confidentiality of the individuals within the study. Human subjects/IRB approval was obtained from the university prior data collection and anylysis.

Definitions

A number of terms and variables are included in this study and are defined as follows to provide clarity.

Enrollment status is the student's standing at a university or college, categorizing the individual as full-time, part-time, three-quarter time, half-time, less than half-time, withdrawn, transferred, graduated, etc.

Expected Family Contribution (EFC) is the number calculated from information provided on the FAFSA which determines eligibility for federal student financial aid.

Federal Pell Grant is a grant awarded to an undergraduate student who has financial need.

Federal Perkins Loan is a loan for undergraduate and graduate students with financial need.

Financial literacy is the understanding of financial concepts coupled with one's ability to make sound decisions for the management of personal finances in both the short term and long term, in light of economic conditions and life events (Remund, 2010).

Financial need is the difference between the cost of attendance (COA) for a particular school and the expected family contribution.

First-year retention rate is the percentage of students who return to the same college after the first year of attendance (first three semesters of college including the summer semester).

First-generation students are students who would potentially be the first person within their family to graduate with a bachelor's degree.

Graduation rate refers to the academic progress of students who started their

studies as full-time, degree-seeking students and completed their intended course of study. For this study, graduation rates are measured in four-, five-, and six-year cumulative increments. Five-year graduation rates also include those who graduated within four years. Similarly, six-year graduation rates include students who also graduated in four and five years.

Mean loan amounts refer to the total amount of loans accumulated at the last semester of attendance regardless of graduation status. These loans include all known loan amounts as reported to the university's Department of Financial Assistance.

Mean scholarship amounts refer to both merit-based and need-based awards. For this study, all federal and state grants are included within this definition. This term includes all monetary awards (grants and scholarships) which do not require repayment.

Net price refers to the cost associated with attending a particular school for one year. The net price is calculated by subtracting any grants and scholarships the student may be eligible for from the institution's cost of attendance.

Retention rate is the measure of the percentage of bachelor's degree-seeking, first-time students who return to the university to continue their studies the following fall semester.

Second-year retention rate is the percentage of students who return to the same college/university after the second year of attendance (first six semesters of college including the summer semester).

Subsidized loan is a loan based on financial need for which the federal government pays the interest that accrues while the student is in school, or has a grace period or deferment status.

Term refers to the length of time a student has attended the university; e.g., term one refers to the first three semesters of attendance. Term two encompasses semesters four through six, and so on.

Unsubsidized loan is a loan for which the borrower is responsible for paying the interest regardless of the loan status. Interest on unsubsidized loans begins upon the date of disbursement and continues throughout the life of the loan until fully repaid.

Work-study is a federal student aid program in which students are employed part time while enrolled in school to help pay for educational expenses.

Limitations

This study examines the impact of a college-level personal finance course on student GPA, debt, retention, and graduation rates. Three main limitations are recognized at the onset of this research project. First, within this study debt is examined through the acquisition of student loans. Total debt may not be fully accounted for, as access to data concerning credit card and personal debts are not attainable. Second, the study relies on Pell Grant data to determine socioeconomic status. Data from Federal Student Aid may not provide a completely accurate assessment of socioeconomic status, as individuals may answer personal financial questions on the FAFSA in order to obtain the maximum financial award. This data rely on the accuracy and honesty of those who applied for financial aid. Finally, the for-credit, college-level financial literacy course being examined with this project was taught by the same professor throughout the scope of this study. Some may regard this as a limitation, suggesting the study may be examining the effectiveness of the professor rather than assessing the impact of the financial knowledge being disseminated. Conversely, other researchers may consider the study to be more

accurate because the course has been taught by the same professor throughout the duration, thereby reducing the number of extenuating variables that may affect the outcome.

Significance of the Study

Previous research has examined the impact of financial literacy delivery systems on financial knowledge and behaviors; however, few have investigated the potential impact of a for-credit, college-level financial literacy course on student academic success and indebtedness. It seems plausible that increased knowledge concerning financial literacy may function as a catalyst to healthier financial behaviors, contributing to student academic success, along with increased retention and graduation rates. This study examines the impact of a college-level financial literacy course on student academic success and financial status as viewed through the acquisition of student loans.

CHAPTER II: LITERATURE REVIEW

Introduction

Understanding the impact of financial literacy on college student success and financial well-being must include numerous factors and constructs. The following literature review highlights the escalating expense of postsecondary education and how college students are bearing this increased cost. These economic forces contribute to changes in student enrollment, especially for first-generation, low-income, and minority students who already face increased barriers to collegiate success. While state and federal grants and loans are readily available for students with financial need, an examination of these programs indicates they are not keeping pace with the rising costs of postsecondary tuition and fees. Additionally, financial stress brought on by the increased cost of higher education, coupled with limited financial literacy, seems to contribute to decreased student psychological and behavioral well-being. In turn, these factors are likely to influence retention and graduation rates. Finally, this literature review examines the dissemination of financial literacy among K-12 schools, as well as at the collegiate level. This conceptual framework provides the basis for the study, which examines the relationship of a college-level financial literacy course on student retention, graduation rates, GPA, and financial standing.

Escalating Cost of Higher Education

Access to postsecondary education has been a foundational priority for American prosperity and societal well-being. Many colleges and universities established during the colonial period were founded on the principle of providing the populous with educated leaders committed to public service (Thelin, 2011). Access to higher education primarily

was reserved for the wealthy upper-class citizenry during these earlier periods. Over time, national and state legislation and initiatives expanded access and affordability of a college education as the nation established numerous institutions throughout the landscape. A college education became a common public good with the expectation that all capable individuals had the right to an affordable postsecondary education. This notion of higher education for all able individuals is called into question as the rising cost of tuition and fees becomes a barrier for many prospective college students.

Prior to the recent recession, "average subsidies per full-time equivalent (FTE) student declined by 26% at public doctoral universities, by 29% at public master's universities, and by 15% at public two-year colleges between 2002-2003 and 2012-2013" (College Board, 2015a, p. 4). While some state funding for higher education has begun to increase, the majority of higher education subsidies remain stagnant, and the cost of college is passed on to the student by means of increased tuition and fees. These increased economic barriers have become a major concern as students incur more of the financial burden for their postsecondary education. The average 2014 college graduate borrowed $29,950 to fund their four-year public and/or nonprofit private college education (Wright et al., 2015).

Tuition and fees have outpaced inflation for the past three decades, making college less attainable for major portions of the population (Lewin, 2008). Government funding for higher education diminished following the impact of the Great Recession. Modest increases in tuition and fees from 2013-2015 have indicated marked deceleration of the cost of college; however, when coupled with the historically low rate of inflation, the cost of college continues to outpace inflation. Public in-state tuition and fees have

grown 3.4% annually beyond inflation for the academic years 2005-2016. The average student entering college in 2015-2016 can expect to see tuition, fees, room, and board to cost approximately $19,548. Average out-of-state enrollment for academic year 2015-2016 was $34,031, with private nonprofit four-year institutions averaging $43,921 per year for tuition, fees, room, and board (College Board, 2015a). The Institute for College Access and Success (2016) reported considerable variances by state, with the likelihood of 46% to 76% of all college graduates incurring educational debt. Average debt across the United States varied from $18,900 to $33,800, with Midwestern and Northeastern graduates owing the greater amount of student loans and personal debt than the rest of the country. Within the past decade, student debt rose by 56%, more than double the inflation rate of 25%.

Financial Aid

Due to the rising cost of higher education, financial aid has become an ever-increasing necessity for college enrollment. At its inception, financial aid was established to level the economic playing field for low-income students, providing them with the monetary support to attend college. Current government and university policies have shifted the emphasis of financial aid from "expanding college access for lower-income students toward defraying the costs for middle- and upper-income families" (Long & Riley, 2007, p. 39) by means of merit-based aid, loans, and education tax credits. This shift has disproportionately disadvantaged lower-income students and students of color. Disparities in enrollment and graduation rates based on family income, race/ethnicity, and first-generation status highlight the need for greater equity within higher education.

Financial Aid and Trends – The Widening Gap

As previously mentioned, the Great Recession caused many state governing bodies to decrease financial support for higher education. In response, the federal government substantially increased subsidies to students from 2009-2011. These subsidies continue to play a pivotal role in college affordability as student borrowing reached historical high rates. Data from College Board's *Trends in Student Aid* (2015b) indicate that African American students, independent status individuals, those who take longer to graduate, and students attending for-profit colleges accrue more debt than their fellow classmates.

For the year 2014-2015, the average undergraduate (FTE) student received $14,210 in financial aid. This included $8,170 from all forms of grants, $4,800 in federal loans, $1,170 in deductions and educational tax credits, and $70 in Federal Work-Study programs. Over the past decade, grant aid increased by 56% ($2,920) per FTE undergraduate student in response to the rising cost of tuition and fees. In total, both graduate and undergraduate students received $238.9 billion in grants and borrowed an additional $10 billion from institutional, state, and private entities (College Board, 2015b). Forty-one percent of grant aid came from colleges and universities, 37% from federal government, 14% from private sources or companies, and 8% from state governments. State student grant aid increased by 13% in the past decade; however, when adjusted for inflation, it has remained stagnant over the past four years.

Declining and stagnant household incomes and rising college enrollment have increased the number of Pell Grant recipients. Pell Grant recipients have more than doubled within the past 20 years, with 8.2 million college students taking advantage of

the federal grants. Thirty-five percent of undergraduate students received Pell Grants in 2014-2015, equating to a 9% increase within the past 10 years. As college tuition and fees continue to increase, Pell Grants are lagging when adjusted for inflation. In 2005-2006, the Pell Grant covered 74% of the average public four-year tuition and fees. Despite the continued increase in financial support, the current grant aid covers only 61% of the fees and tuition.

In essence, student unmet need has been steadily increasing over time as the gap between family income and rising tuition and fees broadens. Unless the student comes from a middle- to high-income family home, the affordability of college has become a significant barrier. Financial aid's paramount objective of creating equity for all income levels for the purpose of attaining a postsecondary degree is becoming less viable. As families and students struggle to afford college, understanding financial processes and products becomes a necessity for postsecondary success and completion.

Three Primary Barriers

Long and Riley (2007) identified three primary barriers to postsecondary access and success which are more likely to affect first-generation, low-income, and minority students. First, the cost of education for these demographic groups continues to increase at a disproportionate rate as compared to others, making college access far less attainable without acquiring sizable student loans and personal debt. As discussed earlier in this chapter, the average student leaves college with approximately $30,000 in student loans. Students from lower-income families obtain more debt as compared to middle- and higher-income families. According to the Pew Research Center (Fry, 2012), in both 2007 and 2010:

> …the ratio of student debt to income was markedly higher for the lowest fifth of households by income. Student debt represented 15 cents of every dollar of household income for the lowest fifth of households in 2007. …educational debt represents a much smaller share of household income for the richest fifth of households in comparison to the lowest fifth of households by annual income. (p. 3)

Overall household debt has been on the decline over the past decade with the exception of the lowest fifth of households by annual income. Here, both household debt and student debt continued to increase for the poorest segment of society, from $17,579 in 2007 to $26,799 in 2010 (Fry, 2012). Mounting student debt on top of existing debts hampers upward mobility. For students who drop out of college prior to obtaining a degree, the burden of paying back student loans can be economically overwhelming, leading to default and even bankruptcy.

The second major barrier to collegiate access and success is academic preparedness. High school students are graduating with less grade-level competency. Researchers estimate that only 32% of high school students meet the academic expectations necessary for college-level material (Greene & Forster, 2003). This number is even lower for Black and Hispanic students (20% and 16%, respectively). Students who do not meet benchmark scores on standardized tests often are required to take remedial coursework in order to bring their academics up to university standards. These remedial classes are usually non-credit bearing, yet students pay the full price of tuition and fees associated with these classes. Any additional time and cost devoted to remedial

coursework decreases the probability of the student obtaining a four-year degree and increases overall student debt.

The third barrier highlighted by Long and Riley (2007) is the lack of financial knowledge associated with the cost of college in conjunction with the complexities of admissions and financial aid systems. These issues are especially cumbersome for students of low income and first-generation families who may struggle to navigate the intricacies of postsecondary admissions, enrollment, and financing. Students aspiring to attend college must complete numerous tasks throughout their high school years in preparation for college admission, especially if they plan to attend selective institutions. These tasks include but are not limited to selecting and taking college preparatory courses, maintaining a high GPA, preparing for and taking college admissions exams, participating in college tours and fairs, applying to college and the Free Application for Federal Student Aid, applying for housing, and obtaining additional funding if the financial need is not met. For first-generation and low-income students, many of these tasks can be overwhelming, especially if the individual is lacking a supportive and knowledgeable mentor. Obstacles impeding a student's enrollment into higher education, whether real or perceived, result in diminished college attendance. Furthermore, once students arrive on campus, they are inundated with making personal and financial decisions in which most have been ill prepared. Maintaining personal finances, acquiring student loans, purchasing books and course materials, and balancing school and personal life matters can be an overwhelming process for the majority of students regardless of socioeconomic and demographic background. Financial knowledge plays a key role in

many of these new responsibilities, yet most students lack proper education or guidance as they prepare for collegiate life.

Enrollment and Graduation Trends

Institutions of higher education along with governmental agencies create financial aid policies and procedures, which affect enrollment and academic success. Through these actions, institutions work to provide all individuals access to a college degree regardless of socioeconomic status and ethnicity. Despite efforts to provide funding through grants, loans, scholarships, and work-study programs, enrollment and graduation rates remain unbalanced across demographic and socioeconomic status. Student financial aid has not kept pace with the continuous escalation of tuition and fees coupled with the general cost of living increases. While grants, loans, and scholarships have been established to help students afford college, many are unable to attend due to unmet need (Long & Riley, 2007).

Enrollment and Graduation by Income

Access to higher education varies considerably by family income. Despite historic increases in postsecondary enrollment, low-income families are underrepresented on college campuses as compared to middle- and upper-income students. For these students and families, the costs associated with higher education are an ever-increasing barrier, as their financial unmet need impedes access. Of the high school graduating class of 2012, 52% of students within the low-income quartile (families with incomes below $18,300) enrolled in college within 12 months of receiving their diploma as compared to 82% of students within the highest-income quartile (family incomes above $90,500) (Baum, Ma, & Payea, 2010; DeSilver, 2014). Significant gaps in college enrollment

remain, even when differences of academic preparation and achievement are taken into consideration. Between 2002 and 2012, enrollment rates grew slightly for both the upper- and lower-income quartiles; however, middle-income enrollment rates jumped by 10 points within the same period of time. Evidence suggests students within lower socioeconomic status are being left behind as compared to middle- and upper-income families.

The probability of obtaining a college degree also differs greatly depending upon family income. High-income graduation rates remain significantly stronger than low-income students, 81% versus 36%, respectively (Adelman, 2006). Thirty-one percent of the students who left college during the 2003-2004 academic calendar reported financial reasons for their early departure. A higher percentage of males (40%) reported leaving higher education than females (23%) due to financial difficulties (Ross et al., 2012).

Enrollment and Graduation by Race/Ethnicity

Differences also were observed in enrollment and graduation rates based on race/ethnicity. The gap between enrollment rates among African American, Hispanic, and White high school students diminished considerably between 2001 and 2011. Sixty-two percent of Hispanics, 66% of African American, and 70% of White students enrolled in college within a year of their high school graduation (Baum et al., 2010). In 2008, approximately 40% of all young adults ages 18 to 24 were enrolled in two- or four-year institutions, an all-time high for college enrollment. The primary increase in attendance was on the community college campuses, while four-year enrollments remained relatively unchanged (Fry, 2009). In light of the recession, students were choosing the less expensive two-year community colleges over four-year institutions.

While some strides have been made in enrollment, significant gaps remain in degree attainment by race/ethnicity. Using data from the 2004 CIRP Freshmen Survey and the National Student Clearinghouse (NSC), DeAngelo, Franke, Hurtado, Pryor, and Tran (2011) reported that Asian Americans and White students had the highest four-year graduation rates (45% and 43%, respectively). Latinos (26%), African Americans (21%), and American Indians (17%) had considerably lower graduation rates from four-year, degree-granting institutions. White and Asian American students were twice as likely to complete their program of study within four years as compared to African American students, and almost three times as likely when compared to American Indian populations. Six-year graduation rates show sizable increases across all ethnicities; however, significant gaps in degree attainment remain. While 64.3% of Whites and 73.2% of Asian Americans graduate within six years, Latinos (51%), African Americans (41%), and American Indians (38%) continue to lag behind.

Enrollment and Graduation by First-generation Status

First-generation college students, identified as students whose parents have not earned a four-year degree, face a multitude of obstacles when striving to obtain a degree from an institution of higher education. Many first-generation college students come from minority and low-income backgrounds. Coupled with the social and economic barriers often associated with these demographic backgrounds, first-generation college students face additional impediments. First-generation students are more likely to begin their college experience at two-year institutions, take part-time classes, are required to enroll in remedial coursework, and are more likely to delay entry due to financial constraints. Students who begin their college experience at a two-year institution are less

likely to transfer and obtain a four-year degree (Long & Riley, 2007). Additionally, first-generation students are more likely to work full time while attending school, often causing disruptions to academic schedules. These characteristics place a student at greater risk of dropping out prior to earning a degree (Engle, 2007).

While enrollment rates for first-generation students have risen over the past few decades, these students are less likely to obtain a four-year degree as compared to their fellow classmates whose parents attended and graduated. Only 27% of first-generation students obtain a college degree within four years as compared to 42% of students with parents who have had college experience. The graduation gap between these two groups remains about the same when assessing six-year graduation rates (DeAngelo et al., 2011).

Student Debt

Student Loans

According to the College Board report on *Trends in Student Aid* (2015b), student borrowing has steadily declined over the past four years, possibly indicating recent gains in household incomes following the Great Recession. Overall, students and their families borrowed 14% less from the years 2010-2011 to 2014-2015. The average student loan from the Stafford Subsidized Loan Program was $3,750, while the unsubsidized loans were $4,125. Thirty-six percent of undergraduate students acquired federal loans (subsidized and unsubsidized) during the 2014-2015 school year. This represents an 8% increase from 2004-2005 levels (College Board, 2015b).

However, according to the Institute for College Access and Success (2016), 68% of the college students who graduated from public and private nonprofit institutions in 2015 had acquired student loans. These graduates owed an average of $30,100, a 4%

increase over the previous year. Debt levels for these 2015 college graduates averaged from $3,000 to $53,000, with higher debt levels reported in the Northeast and Midwest states. Those with the lowest debt levels were found in western states.

Data for the ICAA report were gathered from institutions that voluntarily provided information concerning typical student debt, including private loans. This compilation of data came from over half of all nonprofit colleges and public bachelor's degree-granting, four-year institutions within the United States. State and national averages were based on this robust data, which may represent a more accurate assessment of college student debt. Colleges and universities are not presently mandated to report student debt levels. Subsequently, federal data do not provide figures concerning typical college student debt, which may include non-federal student loans and credit card debt. Approximately one-fifth of the class of 2015's overall debt consisted of non-federal loans. These nonfederal loans made available through local and national banks often are more expensive, have fewer repayment options, and provide fewer consumer protection standards than federal student loans. At the onset of the Great Recession, non-federal education loans grew to $25.6 billion in 2007-2008 but have substantially decreased to $10.1 billion in 2014-2015 (College Board, 2015b).

Credit Cards

Purchasing on credit began in the early 1900s as a way for department stores and oil companies to increase customer convenience and loyalty. In the 1950s the Dinners Club Card became a popular means of transaction for the use of entertainment and travel purchases. By the 1970s the credit card became an established and normative form of payment, dynamically changing individual and family economic habits (Woosley &

Gerson, 2016). Recognizing an untapped source of income, credit card companies began marketing to college students in the 1980s (Manning, 2000). Today, college students are using credit cards more than ever before to fund their college education and/or lifestyle. Increased use of credit cards among college students is attributed to numerous factors. Making purchases on credit has become social norm for many individuals. Using credit cards in place of cash purchases often is seen as a more convenient form of monetary transactions. Acceptance of debt and the "need to build one's credit score" often is a reason individuals give for continuous use of credits cards. Additionally, many students may find it necessary to purchase on credit to pay current debts associated with college enrollment and basic living necessities. As the cost of college continues to rise, so does the use of credit cards and credit card debt.

According to a 2009 report from Sallie Mae, 84% of all undergraduate college students had at least one credit card. Of these individuals, over half had four or more cards within their possession (4.6 average). In 2004, 42% of all freshmen owned a credit card, and by 2008 freshmen credit card ownership increased 25%. Credit card sales representatives often are seen on college campuses soliciting their product, but research indicates only 5% of students obtain their first credit card through these interactions. The majority of students chose their first credit card through direct postal mail from a vendor (38%), referral from a parent or friend (26%), online web search and applications (16%), in-store solicitation (11%), followed by email and phone solicitation (4%).

The mean credit card balance for college students was $3,173, with a median balance of $1,645. Ninety percent of undergraduates used credit cards to pay for educational expenses, including school supplies and textbooks. Using credit cards to pay

for tuition increased by 25% from 2004 to 2008, with 30% of all undergraduates utilizing this form of payment to fund their college education. Evidence suggests college students are living beyond their means in regard to spending habits. According to Sallie Mae (2009), 40% knowingly purchased items without the ability to pay their bill upon receipt. Sixty percent of all credit card holders were unaware of their current balance(s) and were surprised by how much they owed. This lack of knowledge concerning credit card balances seems to highlight a serious deficit in personal budgeting skills, behaviors, and financial knowledge. Moreover, 82% of credit card carrying undergraduate students incurred finance charges by maintaining a monthly balance. The vast majority of credit card carrying college students are drawn to the convenience, but also knowingly incur considerable debt compounded by substantial interest rates when they fail to make the minimum monthly payments.

Many college students lack basic financial skills necessary to remain financially solvent. Increased student loan debt, along with credit card problems, is putting students at financial risk (Henry, Weber, & Yarbrough, 2001). Furthermore, students are experiencing high levels of anxiety associated with credit card debt repayment. Forty-five percent of all undergraduate cardholders expressed high levels of anxiety concerning credit card payments, with nearly a quarter of these individuals indicating "extreme anxiety" (Sallie Mae, 2009).

A study by Pinto, Parente, and Palmer (2001) examined the relationship between academic performance, student employment, and credit card usage. Over 1,000 students were surveyed from three institutions located in the northeastern United States. The researcher divided the sample into two groups: low academic performers versus high

academic performers based on GPA. Variables within the study included the number of credit cards, total outstanding credit card balances, hours employed, and anxiety associated with credit card usage. Lower performing students indicated the need to work along with increased hours of employment in order to pay off credit cards. Higher performing students reported more anxiety concerning credits cards than their lower performing classmates, possibly indicating an increased awareness of the potential pitfalls of credit card misuse.

An online survey conducted by Robb and Pinto (2010) examined the consumer habits and credit card behaviors of 1,244 students at two major universities located in the Southeast. Independent sample t-tests highlighted the differences between financially at-risk (FAR) college students to non-financially at-risk (NFAR) individuals.

> Financially at-risk students met one of the following criteria: 1) had credit card balances of $1,000 or more, 2) were delinquent on their credit card payments by two months or more, 3) have reached the limit on their credit cards, and 4) only pay off their credit card balances some of the time or never." (Lyons, 2004, p. 61)

Significant differences were found between FAR and NFAR students. Financially at-risk students used credit cards more frequently for tuition payments, groceries, and auto expenses. Likewise, FAR students used credit cards more frequently compared to NFAR students to cover expenses associated with travel, clothing, and eating out. This research indicated that FAR students used credit cards to "fuel their lifestyles" (Robb & Pinto, 2010, p. 832), spending more than NFAR individuals on non-essential expenses. In addition to increased credit card use, FAR students engaged in riskier financial behaviors. These students were more likely to "1) make only the minimum payment on their cards,

2) make delinquent payments, 3) go over their credit card limit, 4) use their credit card(s) for installment purchases, and 5) use their credit cards for cash advances" (p. 832). These behaviors often lead to additional financial problems (e.g., higher interest rates, penalties, and poor credit) which may adversely affect their college persistence and potential graduation.

As the cost of college continues to rise, so too the likely use of credit cards among college students in order to pay for academic and personal expenses. Many college students will incur substantial interest rates and penalties associated with credit card companies due to poor financial choices and behaviors. Education concerning credit card procedures and policies may help students avoid unnecessary debt and stress brought on by financial mismanagement.

Student Loan Delinquency and Default

Student loan debt is at an all-time high, surpassing auto loans, credit card debt, and all other forms of household debt with the exception of home mortgages. Over 40 million people in the United States have student debt totaling more than $1.2 trillion, which continues to grow (Denhart, 2013,Dynarski, 2015). This escalation in student debt reflects the growth in college enrollment rates over the past few decades coupled with increased need for financial assistance among many individuals. Private and government-sponsored student debt increased fourfold from $250 billion in 2003 to $1.1 trillion in in 2013 (Lochner, 2015). Rising student debt combined with the recent labor market uncertainty brought about by the recent recession has caused concern among many college administrators and economists (Austin, 2013; Denhart, 2013; Looney & Yannelis, 2015). The combination of economic uncertainty and rising student debt has

resulted in higher levels of student loan delinquency and default rates. This scenario again calls into question the financial knowledge students and family members possess when applying for government and private loans and their ability to make sound financial choices for their future. Student debt reflected in national default and delinquency rates is cause for concern, as many former college students find themselves in financial straits faced with looming student loans and credit card debt. Many households struggle to balance basic living expenses in addition to paying down student debt.

A report from the Institute for Higher Education Policy (Cunningham & Kienzl, 2011) examined data from five of the largest student loan granting agencies, accounting for 25.7 million loans among 8.7 million borrowers between 2004 and 2009. This study specifically analyzed a subsection of data comprised of 1.8 million borrowers who entered repayment in 2005. Of this cohort, 37% were able to pay down their student loans without becoming delinquent or entering default. Delinquency is understood as failure to make a payment within 60 days of the due date. Borrowers who become delinquent on student loans often are reported to credit bureaus, which affects their credit rating and ability to obtain loans for future purchases such as mortgages, car loans, and other consumer loans. Individuals are considered in default if they exceed 270 days of delinquency. Borrowers entering loan default are subject to increased credit problems, and these loans may be turned over to collection agencies.

Of the 2005 cohort, 26% became delinquent on their student loans. Of this group, approximately 21% used deferment and/or forbearance to avoid default. Within the first five years of loan repayment, 15% of borrowers became both delinquent and defaulted on their student loans. In total, 41% of the 2005 cohort struggled to pay back their student

loans in a timely manner. For every borrower who defaulted on their loan, two additional individuals had some instance of delinquency.

Data from this 2005 cohort reveal major distinctions in loan repayment behaviors based on graduation status. Students who did not graduate from their program of study were 12% more likely to become delinquent as compared to students who did graduate. Default rates increased for non-graduates by 10% as compared to students who completed their course of study. Individuals who leave college without earning a degree face considerable financial hardships as they struggle to pay back student loans without the credentials to compete in the labor market (Gladieuz & Perna, 2005).

> College plays a bigger role in predicting who will default than either the background of the borrower or the type of institution attended. All else being equal, students who are successful in their studies tend to have lower default rates than those who are not. This is a hopeful finding in that loan repayment appears to hinge on factors that are at least partially under the control of the borrower, the school, or both. (McMillion, 2004)

Financial Stress and Academics

As federal and state funding for postsecondary education continues to decline, the financial burden of obtaining a college degree is evermore placed upon the student. For many individuals, this increased monetary burden becomes a barrier to degree attainment. The majority of students are paying for their college education by means of increased student loans, supplementary employment, and credit card debt. Furthermore, over 60% of college students report major distress concerning their ability to fund their postsecondary education (Joo, Durband, & Grable, 2008). This stress, in association with

poor financial management, appears to have a significant effect on student retention rates. Roughly half of all students who enter four-year institutions will not persist to graduation, partly due to financial difficulties. Numerous studies have examined the many factors associated with student retention; however, the two studies highlighted in this section of the literature review focused on financial behaviors in association with academic performance and persistence, coupled with psychological well-being.

Financial Stress, Dropout Rates, and Course Load Reduction

The first study by Joo et al. (2008) hypothesized that financial burdens are associated with student dropout rates and reductions in course loads. Specifically, the researchers attempted to examine the characteristics of these students in light of financial constructs. The authors suggested that information gleaned from their study would be useful in addressing this barrier through increased educational initiatives for at-risk populations.

In the fall semester of 2004, Joo et al. (2008) distributed a web-based survey to students enrolled in general education courses offered through the Department of Educational Psychology at a large public university (25,000 students) in the southwestern United States. The survey was available online for three weeks, and students who participated in the survey received lab credit for their participation. The 61-item survey instrument was developed from prior research; and items assessed credit card attitudes and behaviors, financial wellness, education, as well as planning, academic performance, and self-esteem. Demographic information gathered included age, gender, ethnicity, marital status, employment, housing, academics, and past experience with financial matters. The authors created two groups for their analyses; one group of students

reported no financial difficulties and the second group was labeled "financially strained" (p. 297). The financially stressed group responded that they had reduced their course load or dropped out for a semester in order to work more hours to pay down debt. These two groups were then compared on several dependent variables, including financial stress, worry about debt, self-esteem, and attitudes about credit.

Of the 503 usable responses, 85 (17%) were included in the financially strained group. ANOVA, *t*-test, and Chi-square tests were used to analyze the data of this group and compare it to the data of those who did not drop out or reduce coursework. Of the entire sample, 38.1% reported that they worried about their debt, with 7% indicating gross dissatisfaction with their financial situation. Fifty-four percent stated being financially stressed, with an additional 8% experiencing extreme monetary stress. Approximately 50% of the students indicated a general lack of knowledge concerning their personal financial situation. When asked if financial issues interfered with academic performance, 5% responded positively. Almost 68% of the students owned one or more credit cards, with 25% of those individuals indicating that they never pay their balances in full. Students indicating financial strain reported that their academic performance was hindered due to financial concerns as compared to those who did not worry. Additionally, those who reported financial strain had significantly decreased levels of self-esteem. In the overall analysis, students who experienced financial difficulties were more likely to drop out and/or reduce their course load.

One limitation of this study is the lack of specific economic information measuring students' socioeconomic status. Gathering this information was viewed as problematic due to the nature of student income (scholarships, gifts, sporadic

employment, etc.) and general lack of knowledge concerning parents' income. In addition, the researcher may not have collected a complete or true sample due to the fact that many students never returned to college or reported their reasons for dropping out.

Perceptions of Debt and Persistence

Similar to the previous study, Robb et al. (2012) investigated student perceptions of debt in relation to academic persistence behavior. Recognizing the continued increase in tuition and fees while financial aid and scholarships remain at relatively consistent levels, students are securing more loan and credit card debt to fund their education. Specifically, this study examined student debt and perceptions of debt (student loans, credit card, and other debts) in relation to persistence behaviors and demographic information.

Robb et al. (2012) collected data from two major universities within the United States via an online survey emailed to the entire student population. The first university was located in the Southwest (22,000 students) and the second in the Midwest (25,000 students). The survey consisted of 83 questions concerning financial issues and demographics. In this study, the authors conducted analyses of four models of multiple factors and their impact on students' experience of debt. Each model included the same independent variables and a different dependent variable. The first model predicted the likelihood that students would have "difficulty in completing a degree due to the emotional burden associated with their financial aid debt" (Robb et al., 2012, p. 377). The second model predicted the likelihood that consumer debt would make obtaining a college degree problematic. The third model predicted the odds that students would reduce the number of credit hours taken due to financial issues. Finally, the fourth model

predicted the likelihood that students had previously dropped out of postsecondary education due to financial reasons. Dependent variables (predictors) for all four models included demographic and socioeconomic factors, freshmen involvement, credit card use behavior, loan debt, financial independence, and a number of additional financial measures.

A response rate of 6% yielded 3,008 usable surveys. Robb et al. (2012) reported the following findings via the use of logistic regression. Students with lower GPAs were more likely to feel burdened by financial aid debt. Increased debt load accounted for perceived financial strain; however, students who had more than $30,000 in loans were no more burdened than students with no debt at all. Freshmen were more likely than upperclassmen to report emotional strain concerning financial aid and consumer debt. Overall, students with poor credit card behaviors reported more emotional burdens in light of their student loan debt and were associated with perceived persistence difficulties. These students also were more likely to reduce their hours or have previously dropped out. Students from low socioeconomic communities were more likely to report persistence problems when compared to middle-income students. As for enrollment, students from lower socioeconomic communities also were more likely to decrease their hours or drop out due to financial reasons as compared to middle-income families. Last, females, students with higher GPAs, increased freshmen involvement, full-time status, and being employed were all associated with decreased probability of dropping out of school.

Overall, the study by Robb et al. (2012) provided an in-depth analysis of student financial behaviors and perceptions in relation to college persistence. However, the low

survey response rate could be viewed as a significant limitation. The data may have been weighted by students with greater financial concerns. Additionally, this study did not survey students who dropped out and never returned. Including this missing demographic could significantly alter the results of the study.

The studies by both Joo et al. (2008) and Robb et al. (2012) strived to investigate the relationship between student financial issues and college persistence. Recognizing the continuous rise in the cost of a college education, students are increasingly encumbered with greater financial burdens by way of loans and credit card debt. Through their work, the researchers examined student perceptions, demographics, and financial factors that affect college persistence, in hope of guiding universities to develop stopgap measures to increase retention.

Both studies utilized online surveys to gather data. Joo et al. (2008) collected their sample from students enrolled in general education courses at a large southwestern university, while Robb et al. (2012) attempted to collect data from the entire student body of two major universities in the Southwest and Midwest United States. Both studies identified variables as students who reduced coursework or dropped out due to financial burdens. However, Robb et al. (2012) expanded upon the Joo et al. (2008) study by including measures addressing students' perceived emotional burden associated with financial aid and consumer debt. Robb et al. (2012) also collected additional items to gauge socioeconomic characteristics, student commitment, and involvement, while Joo et al. (2008) included measures of self-efficacy.

The results of the two studies were similar, in that students with perceived financial burdens were significantly more likely to reduce their course load and/or drop

out. Joo et al. (2008) reported that students with financial strain exhibited lower levels of self-efficacy. This, in conjunction with the Robb et al. (2012) analysis that students with financial burdens are more likely to have lower GPAs, may suggest a relationship between student self-efficacy and financial circumstances. Both researchers reported that those who dropped out or reduced their hours also were more likely to have financial concerns due to credit-related problems (e.g., credit card debt and missed payments).

Both studies refrained from discussing major limitations. One limitation reported by Joo et al. (2008) was the lack of ability to collect specific financial data due to the difficulty and accuracy of gathering such information. However, the study by Robb et al. (2012) collected this data, yet did not acknowledge the possibility of inaccurate self-reporting as a possible limitation. Additionally, the researchers recognized the possibility of a skewed sample due to the low response rate and the possibility that those who responded may have faced greater financial burdens as compared to the overall population. Last, both projects did not attempt to gather information from students who dropped out and never returned. This could be considered a limitation, as many of those individuals may have left higher education due to financial barriers.

In conclusion, both studies provide a framework from which continued research is warranted. Robb et al. (2012) postulated the need for research analyzing the relationship between rising student loans and academic persistence. Joo et al. (2008) suggested analyzing student incomes and spending to ascertain a more complete picture of their financial habits. Furthermore, Joo et al. (2008) implied that to allow someone to drop out of college impinges on their overall lifetime financial well-being. With the ever-rising cost of college paired with students' struggle to fund their education, the need for

financial initiatives and education is advised. A number of universities within the United States have developed financial literacy initiatives (e.g., financial counseling, educational workshops) in order to assist students with economic burdens. Research analyzing the necessity and effectiveness of these services seems to be the next logical step in the field of financial literacy and retention.

Financial Literacy

Defining Financial Literacy

The establishment of an operational definition of *financial literacy* has been an ongoing process for many years. The term takes on varying degrees of understanding depending on the user and the audience addressed. A scholarly conceptualization of financial literacy is likely to have a uniquely different perspective than that of a consumer advocate or financial expert (Remund, 2010). The term often includes numerous foundational components including financial knowledge, behaviors, skills, motivations, and the like. Depending up the context and intended audience, the conceptual definition often morphs into a transitory term. To date, no single comprehensive definition has been assigned to the term *financial literacy*.

The notion of financial literacy dates back to the early 1900's with the onset of consumer education and research (Jelley, 1958). At its most basic level, it is recognized as one's ability to manage money. However, this simplistic definition does not incorporate the totality of personal economics in light of current global economic structures. As economies and financial terminology have expanded over time, so too has the concept of financial literacy and personal money management. Remund's (2010) study, which attempted to explicate the term, suggested that the many definitions of

financial literacy fall into five separate categories:

> 1) knowledge of financial concepts, 2) ability to communicate about financial concepts, 3) aptitude in managing personal finances, 4) skill in making appropriate financial decisions, and 5) confidence in planning effectively for future financial needs. (p. 279)

The first category, knowledge of financial concepts, is the most common component of financial literacy. In order to make healthy financial decisions for current and future economic well-being, individuals must possess some knowledge of financial terminology and concepts. Knowledge of financial terms is a precursor to personal economic stability, as observed in numerous scholarly studies (Braunstein & Welch 2002; Vitt et al., 2000). This description is the most simplistic and is considered the foundation for all other definitions to build upon.

The second category, the ability to communicate about financial concepts, expands beyond the possession of knowledge and incorporates the ability to influence and educate others (Fox, Bartholomae, & Lee, 2005). In essence, the capacity to explain and communicate financial concepts provides evidence of an individual's grasp of key financial concepts. The ability to effectively communicate financial concepts demonstrates one's grasp of financial mastery.

The third category, the ability in managing personal finances, indicates an aptitude to perform tasks associated with handling personal finances. In this classification, financial literacy can be measured by one's ability to perform monetary tasks such as opening a bank account, applying for a loan, investing, obtaining health and life insurance, comparing investment options, and preparing for future economic needs

(Emmons, 2005). Actions such as these can be quantitatively measured as evidence of financial literacy. At this level, literacy is not simply the ability to identify and explain financial concepts but includes the capability to implement this knowledge through tangible actions that address "earning, protecting, and spending money" (Remund, 2010, p. 280).

The fourth category, skills in making appropriate financial decisions, incorporates the notion of making positive choices that lead to financial gains. The integration of the decision-making process incorporates critical thinking skills into personal financial management. Within this understanding, individuals not only identify, communicate, and possess the skills to make financial decisions, but also make smart choices resulting in sound economic outcomes (Rhine, & Toussaint-Comeau 2002). These financial decisions also may imply the presence of ethical reasoning and value systems of the individual (Remund, 2010). Financial literacy is understood as "a set of critical thinking skills to weigh and assess the pros and cons of a particular decision relative to one's own needs, values, and goals" (Kozup & Hogarth, 2008, p. 131).

Last, Remund's (2010) fifth category is identified as the confidence to plan effectively for future financial needs. Scholars within the field have not always addressed this element of confidence within financial planning. Confidence in making positive financial decisions is recognized as habits that are developed over time. Short-term decisions lead to long-term outcomes. Long-term gains in financial well-being often are the result of short-term decisions over time. For this reason, some scholars have not included the concept of confidence within a definition of financial literacy but have assumed daily financial behaviors are an integral part of future planning. Financial

planning is an immediate task with compounded interest over time. Confidence to plan effectively is a result of well thought out short-term healthy financial decisions viewed over a considerable period of time. "In short, knowledge drives aptitude, which in turn influences how one manages money" (Remund, 2010, p. 284).

Identifying an operational definition of financial literacy is an additional point of contention for researchers and financial outreach organizations. A tangible measurement of financial literacy is a difficult construct to establish. No definitive measurement of financial literacy has been recognized among scholars. Instead, financial data such as household income, savings, homeownership, and spending habits are gathered to measure aspects of financial literacy, status, and well-being. This information does not take into consideration life events and circumstances that may alter an individual's financial standing. Additionally, some measurements may not accurately assess one's knowledge about finances. Financial knowledge does not automatically equate to economic well-being, just as increased economic status is not always linked to increased financial literacy.

Remund's (2010) proposed conceptual definition of financial literacy is used for this study. Incorporating each of the five categories previously mentioned, the term financial literacy is recognized as:

> a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions. (p. 284)

Financial Literacy Education in K-12

The Council for Economic Education (CEE) produces a biennial report on the state of economic and financial education within the United States. A 2016 CEE report indicated slow growth within the area of personal financial literacy and no advancements in economic education for the nation's K-12 school systems. All 50 states contain aspects of economic curriculum within their educational standards, but only 20 states require students to take an economics course (a moderate decline from the previous report published in 2014). Personal financial literacy is even less emphasized, as only 17 states require high school students to complete coursework on money management. Only five states require students to take an entire semester course devoted to financial literacy.

According to the U.S. Department of Education, National Center for Education Statistics (2014), teenagers in the U.S. performed just below the average score for financial literacy when compared to 17 other industrialized countries based on the Program for International Student Assessment (PISA) data. Mean scores ranged from 379 in Columbia to 603 in China. United States 15-year-olds scored an average of 492, finishing ninth out of 18 countries. Only 9% of these U.S. adolescents scored at the level of proficient, while almost one in six failed to make a passing or baseline grade for financial literacy.

Researchers have analyzed the effectiveness of financial literacy initiatives at various levels of education with mixed results. Some studies have indicated insignificant growth in financial knowledge, much less improved financial behaviors. This is particularly notable of studies conducted with adolescent high school students. Mandell and Klein (2009) noted the ineffectiveness of high school financial literacy courses based

on Jump$tart survey data. College students who received a financial literacy course while in high school failed to demonstrate increased knowledge as compared to those who did not take a course. Similar findings also were highlighted by Peng et al. (2007), whose study found no significant relationship between high school personal money management courses and investment knowledge. Researchers postulate these lackluster results from student disinterest in financial matters due to the lack of immediacy and/or need for financial knowledge at this particular stage of life. In essence, researchers suggest the driving force for improved literacy may be time and interest sensitive. Hathaway and Khatiwada (2008) stated:

> We do not find conclusive evidence that, in general, financial education programs do lead to greater financial knowledge, and, ultimately, to better financial behaviors. However, this is not the same as saying that they do not nor could not. (p. 19)

In order to promote healthy financial behaviors, Hathaway and Khatiwada suggested educational instruction focus on particular groups of individuals addressing specific time-sensitive financial needs such as debt reduction, retirement planning, or paying for college. Financial literacy education based on the individual's needs, delivered at a time when it is most receptive, may contribute to increased knowledge and act as a catalyst for positive money management decisions.

Conversely, other studies have highlighted growth in financial literacy within adolescent populations. Danes et al. (1999) examined the National Endowment for Financial Education's High School Financial Planning Program (HSFPP). Data collected at the end of the curriculum and three months following indicated growth in student self-

efficacy, savings rates, and financial literacy knowledge. Bernheim et al. (2001) studied the effects of statewide mandates on financial education. Results indicated a positive increase in net worth and savings rates among participants during their prime earning years for students exposed to financial literacy education during their high school years. These findings also were supported by Tennyson and Nguyen (2001). High school students from states that required specific money management courses scored significantly higher than states which did not mandate (or provided a general mandate) for financial literacy education. This evidence suggests specific expectations concerning course requirements or state mandates may stimulate overall financial literacy among high school students.

Numerous research studies have provided contradictory evidence as to the impact of financial literacy education within the K-12 system; however, some educators dismiss the subject matter as unnecessary or insignificant to societal economic health. Evaluation of financial literacy and its impacts faces significant barriers. Improvements in assessment measures along with the adoption of standardized evaluative frameworks may help guide future studies as researchers strive to improve upon curriculum and implementation of financial literacy programs within schools (McCormick, 2009). Financial literacy education for K-12 schools requires a comprehensive pedagogical approach as compared to adult money management education, which often focuses on the specific needs of the audience being addressed.

Financial Literacy in Postsecondary Education

As the cost of a four-year degree continues to rise, increased attention on the financial literacy needs of college students has been garnering the attention of college

administrators and governing entities. Various types of financial literacy delivery systems are being integrated into colleges and universities to address the growing need to help students expand their knowledge of budgeting and money management in an effort to curb excess student debt. These delivery systems come in the form of freshman orientation programs, non-credit and credit-bearing courses, campus-wide workshops, mass-media communications, online resources, peer mentoring, and professional financial counseling.

Many students entering collegiate life may feel ill-equipped to handle financial matters due to their limited experience. Upon acceptance to a university, students are expected to make substantial financial decisions which will have a major impact on their economic future. Personal finance decisions concerning college tuition, housing, transportation, and living expenses often are uncharted territory for the majority of first-year college students. Many studies have underscored the lack of financial knowledge among these individuals (Chen & Volpe, 1998; Davies & Lea, 1995; Roberts & Jones, 2001; Volpe, Chen, & Pavlicko, 1996). This lack of knowledge may hinder a student's ability to make sound financial decisions as they attempt to find ways to pay for tuition, fees, and living expenses. Furthermore, their limited knowledge and lack of experience with money management may become harmful to the individual's future financial status with the burden of student loans and credit card debt (Long & Riley, 2007). The resulting lack of financial literacy may leave students susceptible to financial crises (Henry et al., 2001; Joo et al., 2003).

Goetz, Cude, Nielsen, Chatterjee, and Mimura (2011) conducted a survey of 509 undergraduate students assessing their interest in three financial education delivery

systems: “on-campus financial counseling center, online financial management resources, and in-person educational workshops” (p. 27). A preference for online resources was ranked the highest, followed by workshops, then financial counseling centers. Interest in all three programs was substantial, possibly indicating the necessity for each of these venues on college and university campuses. A multipronged approach may address various levels of student financial concerns which are dependent upon the individual’s particular circumstance. Only 26% of students said they would use a financial counseling center on a regular basis; but when faced with a financial crisis, the response rate rose to an 80% likelihood of seeking in-person financial advice. The use of online educational pedagogies may reflect student comfort with technology and desire for flexibility. However, online education systems often are associated with higher rates of attrition, as students may lose interest if the presenting media does not engage the individual (Angelino, Williams, & Natvig, 2007). Meanwhile, workshops may provide students with relevant financial information but may not address the particular concerns of the student. Due to the short timeframe in which workshops are often presented, in-depth money management practices may not be fully or comprehensively addressed.

Regardless of the platform, dissemination of money management information has become an essential component of higher education. If the cost of college continues to rise, universities will need to continuously promote healthy saving and spending habits among its student body. Finding the most effective venues for disseminating this information may be a key component to student academic and financial success. Last, postsecondary institutions which provide financial education via multiple delivery

systems are likely to see increased economic benefits for their students, which may lead to increased retention and graduation rates.

The following section highlights the primary financial literacy delivery systems currently found on college campuses. These platforms are college courses, online financial resources, peer-based financial mentoring/counseling, as well as financial workshops, orientation programs, and first-year experience seminars.

College Courses

Many colleges and universities offer personal finance courses accessible to the greater student body. These courses often address a wide variety of subject matter including budgeting, loans, investments, home ownership, and retirement planning. Seyedian and Yi (2011) examined the impact of a managerial finance/portfolio management course on college student financial literacy. The study examined 113 college students using a pre-test post-test design. Demographic factors, financial background, student engagement, and motivation were examined. Overall, the students within the study improved upon their knowledge of money management but did not rise to faculty expectations. Students who actively participated and put forth more effort in classroom activities outperformed classmates who were less engaged. This evidence may highlight the need for student-centered curriculum and teaching methods which engage active learning. Similar to the financial literacy studies conducted with high school students, money management courses for college students may be more beneficial if the scope of the curriculum addresses their current needs (e.g., budgeting, student loans, tuition, scholarships). Additional results highlighted gender differences within the pre-test, but not in post-test evaluation. Males outperformed females within the pre-test, but

no significant differences were found within the post-test, indicating significant improvement in female financial literacy by the end of the course.

Online Financial Resources

College students are actively using online media platforms for social engagement, coursework, and other educational purposes. This is particularly true for distance learners and non-traditional college students who may not have easy access to college campus resources due to distance or scheduling restraints. Online financial management resources were highlighted as the preferred method for money management education, as previously cited by Goetz et al. (2011). While online financial literacy may be more readily accessible, students may not take advantage of the resource if not prompted as a course assignment or required action on behalf of the postsecondary institution. Accessing online resources requires motivation on the students' behalf to retrieve the needed information. Additionally, if the information is not easily accessible or does not address their specific concerns, the usefulness of the online media may be found to be inadequate. Online resources are not always adaptable to individual concerns.

Research has highlighted key characteristics which are essential to engage individual learning via online media platforms. In a study by Briggs, Burford, De Angeli, and Lynch (2002), more than 2,500 people were asked to evaluate the online advice provided within a website designed for individuals who were seeking to purchase a home. Results indicated three categories which influenced participant rejection or acceptance of the advice: personalization, source credibility, and predictability. The researchers suggested financial websites need to focus on particular target populations while generating a sense of trustworthiness and legitimacy. Furthermore, online education may

not provide students with hands-on experiential practices which often help students retain information. In order to promote increased learning and the development of healthy money management behaviors, researchers have suggested a "combination of financial education, institutional access, and opportunities for saving accumulation" (Johnson & Sherraden, 2007, p. 136).

Peer-based Financial Mentoring/counseling

Peer-based financial mentoring programs are becoming more commonplace on college campuses (Salovey & D'Andrea, 1984). This pedagogical model is supported by social learning theory which endorses the notion that students learn best from individuals similar to themselves (Damon, 1984). According to Goetz, Durband, Halley, and Davis (2011), peer-based financial education programs are designed with two primary objectives.

> First, the program provides students, faculty, and staff with financial planning and educational services to increase their level of financial knowledge and help them attain their financial goals. Second, the program facilitates the academic and professional development of undergraduate and graduate students majoring in personal financial planning and related disciplines. (p. 8)

Peer-based education can be aligned with the university's mission of teaching, research, and outreach. Peer mentors are given the opportunity to educate/counsel fellow classmates and provide needed outreach via workshops and classroom presentations. In addition to these services, mentors may take part in research opportunities associated with financial management initiatives as directed by program staff and faculty. These initiatives support institutional goals by means of increasing retention rates and

minimizing academic disruptions, which lead to on-time graduation. Furthermore, financial peer mentors enhance their own professional development by means of improving interpersonal skills through hands-on counseling sessions and development of their presentation skills via large group settings.

Financial counseling has been associated with improved financial behaviors in adult populations. Elliehausen, Lundquist, and Staten (2007) studied the impact of credit counseling and financial behaviors in a longitudinal study with nearly 8,000 individuals. Those who received credit counseling, either in person or through phone conversations, were compared to individuals who did not receive counseling. Credit bureau data were collected and analyzed showing:

> a substantial reduction in debt and improved account usage measured three years later. Moreover, it appears that the counseling experience provided the greatest benefit to those borrowers who had demonstrated the least ability to handle credit at the outset. (p. 26)

While few studies have assessed the impact of college-level, peer-based financial counseling, overall research regarding peer mentoring has indicated the positive impact of this form of student engagement. A structured analysis of over 300 research-based projects supported the substantial impact of mentoring programs (Ehrich et al., 2004). Mentoring and peer-based counseling "has enormous potential to bring about learning, personal growth, and development" (p. 23) across all fields of business, medicine, and education.

Financial Workshops, Orientation Programs, and First-year Experience

University first-year experience courses and orientation programs have been correlated with increased academic success, retention, and graduation rates (Fidler, 1991; Gardner, 1986; Jamelske, 2009). Many postsecondary institutions have integrated financial literacy into these college orientation programs and/or first-year experience courses in an effort to enhance student money management skills and assist individuals with financial aid processes. Dissemination of financial literacy information often is presented in short workshop presentations during freshmen orientation for students arriving on campus for the first time. Other money management presentations often are embedded within first-year experience courses or offered to the entire student body via workshops and seminars.

Borden et al. (2008) studied the effects of a 90-minute financial literacy seminar offered to undergraduate college students. The primary focus of the workshop was to provide individuals with information regarding credit card use and to promote healthy money management behaviors. Pre-test and post-test data were collected on 93 undergraduate participants. Students reported increased intention to adjust their financial behaviors as a result of the information provided. Participants expressed a desire to reduce risky financial behaviors and incorporate positive money management skills into their spending and savings habits. Students also reported an intention to reduce credit card use and to "utilize several types of saving/investment vehicles within the next year" (p. 35).

The brief seminar or workshop format may be easier for students to integrate into their busy schedules and may be more accessible for the greater student body as opposed

to semester-long personal finance courses. Brief seminars focused on specific financial needs of the student throughout the year may be a catalyst to positive money management behaviors.

In summation of the research previously outlined, lack of financial knowledge and money management skills among undergraduates may act as a barrier to college student success. As the cost of college continues to increase, a larger number of students are relying on federal and private loans (along with credit cards) to fund their postsecondary education. While enrollment trends are on the rise for most ethnicities, retention and graduation rates for minorities and first-generation students continue to lag far behind the majority. Low-income families, in particular, are finding a four-year college education to be a financially precarious endeavor. Research has suggested that financial stress associated with economic concerns contributes to negative self-efficacy and lessens one's ability to progress through college. Lack of financial knowledge and money management skills may be a contributing factor to lower retention and graduation rates among undergraduate students. Furthermore, upon graduation or early departure for college, many students are faced with considerable debt, often impeding upon major life events and purchases, with many former students struggling with delinquency or default of their student loans.

Many higher education institutions are promoting financial literacy initiatives across their campuses in an effort to confront economic barriers to retention and graduation. This study examines the impact of one of these initiatives, a college-level personal finance course, on student academic success and financial well-being.

CHAPTER III: METHODOLOGY

Introduction

This section provides an overview of procedures and methods within this study. This project attempted to examine the relationship of an undergraduate college-level financial literacy course on student academic success and financial status as viewed through the acquisition of student loans. With the assistance of the university offices of Institutional Research and Financial Assistance, data including demographics, financial information, and academics were analyzed to gauge the association of a college-level personal finance course on student academic and debt outcomes. Academic outcomes consisted of final semester undergraduate GPA, retention, and graduation rates. Debt outcomes included all government originated and private student loans as reported to the university's Department of Financial Assistance. This section provides details concerning the study's hypotheses, materials and procedures, participants, data management and cleaning procedures, followed by the analysis plan of action.

Hypotheses

The following hypotheses were established to guide this research project.

Academic Impact by Means of GPA, Retention, and Graduation Rates

Hypothesis 1: It is expected that taking a college-level financial literacy course during the first two terms (freshman or sophomore year), compared to not taking the course, will be associated with significantly improved academic outcomes as evidenced by:

(A) increased GPA at time of graduation.

(B) increased first-year and second-year retention rates.

(C) higher four-, five-, and six-year graduation rates.

Financial Impact by Means of Loan Acquisition

Hypothesis 2: It is expected that taking a college-level financial literacy course during the freshman or sophomore year, compared to not taking the course, will be associated with significantly improved financial status as observed by lower student loan balances at the last semester of attendance.

Financial Literacy Course Impact on Graduation Rates Among Subsamples

Hypothesis 3: Significant differences will be observed in six-year graduation rates between students who took the financial literacy class and those who did not within the following subsamples:

(A) Pell Grant recipients.

(B) Non-Pell Grant recipients.

(C) First-generation college students.

(D) Non-first-generation college students.

Materials and Procedures

Archival data were obtained from the university's Office of Institutional Research in collaboration with the Office of Financial Assistance. Data collection included: all known loan amounts; scholarships and grants; GPA at last semester of attendance; retention and graduation data; and demographic information including gender, first-generation status, and ethnicity. All student data were de-identified in order to protect the privacy of the individuals. Because the study used archival data, it was considered exempt by the university's Institutional Review Board.

Participants

The participants for this study included undergraduate students from a midsize public university in the southcentral United States. Students who took Personal Finance 161 during their freshman or sophomore year were selected for this study between the years 2008-2015, for a total of 24 semesters (including summer sessions). The control (or baseline) group consisted of individuals who did not enroll in the personal finance class during this same period of time using a simple random sampling procedure.

Data Management

This study strived to assess the association between taking a personal financial literacy course and academic and financial outcomes in a sample of first-time, full-time college students from a four-year institution in the southcentral region of the United States. Six key paring procedures were conducted in order to obtain a sample representative of this population. Prior to the following data management procedures, the total sample student population consisted of 20,744 individuals. First, from this population, 26 students who took Financial Literacy 161 as a dual-credit course during their high school career were removed from the data set. These students were removed because they did not represent the parameters of the population in question, current first-time, full-time college student enrollment. Second, out-of-state students were removed from the data set in order to control for the increased tuition these individuals pay. Removal of these 4,153 students established an equal cost (tuition and fees) for all participants within the study prior to obtaining grants and scholarships. Third, 507 students who received athletic scholarships were removed, as they may not have represented the average college student desired for this study. Students with athletic

scholarships often receive sizable financial awards and academic supports in the form of tutors, college/academic coaches, mandatory study hours, and other essential support systems not typically found with the average college student. Fourth, students with exceedingly high scholarships (95% above the mean) were removed in order to reduce outliers that may have skewed the data. Excessive scholarship/grant awards were calculated by term, with those over the threshold removed from the population sample. Table 1 provides data concerning scholarship/grant awards by term for the total population.

Table 1

Scholarship/Grant Awards by Term and 95th Percentile Amounts

Term	*N*	Minimum	Maximum	*M*	*SD*	95th%
Term 1	5,539	$125	$29,020	$5,928	$4,760	$15,384
Term 2	5,758	$88	$30,125	$5,966	$4,949	$16,234
Term 3	6,054	$25	$28,752	$6,010	$5,063	$16,272
Term 4	6,206	$25	$34,620	$6,501	$5,432	$17,620
Term 5	6,125	$1	$31,357	$6,883	$5,581	$18,244
Term 6	4,212	$38	$39,774	$7,097	$5,727	$18,547

On average, 348 students were removed from the data set per term for scholarship awards in excess of the 95th percentile.

Next, students who received a grade of D, F, or W (withdrew) in the Personal Finance 161 course were dropped from the data set. These 101 students were removed due to the low grades received, which call into question their retention of the course content and potential impact on future academic success. Finally, only students who took Personal Finance 161 during their freshman or sophomore year (first six terms, including summer sessions) were selected to be a part of the study. Students who took Finance 161

during their junior year (or starting the seventh term, including summer sessions and beyond) were not included. It was assumed that taking a personal finance course later in a college student's career would have little impact on financial status, retention, and graduation.

Individuals removed from the population sample may have had multiple conditions warranting removal from the database. For example, of the 507 students who received athletic scholarships, 242 were also out-of-state students, and one athlete failed Personal Finance 161. A total of 791 individuals took Personal Finance 161 between 2008 and 2015. After removing the dual-credit, out-of-state, athletic and high scholarship awards, low finance course grade students, and selecting only students who took the course during their freshman or sophomore year, 283 students remained in the finance course group.

The same requirements as previously mentioned were used when selecting students for the control group. Prior to the culling, 20,744 students were identified as potential participants. After removing students who took Personal Finance 161 as a dual-credit course or during college, out-of-state students, athletic and exceedingly high scholarship awardees, the database was left with 15,152 individuals. From this data set, a random sampling procedure was used to select 283 students as a control group to compare to the 283 students who took Personal Finance 161, for a total of 566 participants.

Analysis Plan of Action

This investigation used causal-comparative design to examine data both between- and within-group mean differences on a variety of constructs including financial status (at

the end of the last semester of attendance), college GPA, retention, and graduation rates. Analysis compared differences between students who completed an introductory financial literacy course to a random sample of students who did not. Further analyses examined the relationship of a personal finance course on six-year graduation rates within subgroups (first-generation and Pell Grant eligibility status). The purpose of this study was to examine the effect of participation in a college-level personal finance course on student academic success and financial status as observed by mean student loan amounts.

The following statistical analyses were conducted to test the first hypothesis that taking a financial literacy course during students' freshman or sophomore year will have an effect on academic outcomes. First, *t*-tests compared class vs. no-class group differences on student GPA at the end of the individual's last semester of attendance. Second, Chi-square analyses were utilized to examine class vs. no-class conditions on retention status and four-, five-, and six-year graduation status.

The second hypothesis examined student financial status by evidence of student loan balances. An independent samples *t*-test was conducted to compare class vs. no-class conditions on loan balance as of last semester in college, regardless of graduation status.

The third hypothesis, that there will be differences between class vs. no-class conditions within specific subsamples on six-year graduation rates, was tested with Chi-square analyses. For example, six-year graduation status was used to compare class vs. no-class condition within the subsample of full Pell Grant recipients. Similar analyses were run for subsamples of non-Pell Grant recipients, first-generation, and non-first-generation college students.

CHAPTER IV: RESULTS

Introduction

The purpose of this study was to assess the relationship between a college-level personal finance course on student academic success and financial status. Prior research concerning financial literacy at the collegiate level has focused heavily on the retention of personal money management concepts disseminated through an assortment of financial literacy initiatives and curriculums. This study is unique it that it used quantitative methods to investigate the potential relationship a college-level personal financial literacy course taken during students' first two years in college may have on specific academic and economic factors.

The following results section begins by providing pertinent information concerning the participants within the study. First, demographics concerning the total population sample (N = 566) are provided followed by between-group differences of finance course (n = 283) and non-finance course participants (n = 283). Analyses of demographics highlighted any significant differences between the two groups in order to obtain a more detailed description of the subsamples.

Next, each of the hypotheses was tested using independent sample *t*-tests and Chi-square analyses to determine significant differences between the groups. The first hypothesis addressed academic factors (college GPA, retention, and graduation rates) in relation to finance and non-finance course conditions. The second hypothesis examined between-group differences in mean student loan amounts as of the last semester of attendance. Finally, the third hypothesis investigated six-year graduation rates within four separate subgroups (first-generation, non-first-generation, Pell-Grant eligible, and

non-Pell Grant eligible) in relation to enrollment in a personal finance management course.

Participant Demographics

The following section provides demographic information for the entire participant population followed by between-group differences of non-finance class condition individuals and Personal Finance 161 participants. Five hundred and sixty-six first-time full-time college students comprised the total sample population. Of those participants, more females than males were represented within the group (n = 317, 56.0%). Ethnicity distributions were as follows: 515 (91.0%) Caucasian, 19 (3.4%) African American, 13 (2.3%) Hispanic, 12 (2.1%) Multiracial, 4 (0.7%) Asian, 2 (0.4%) unknown, and 1 (0.2%) nonresident alien. Figure 1 provides a graphic view of the entire sample population.

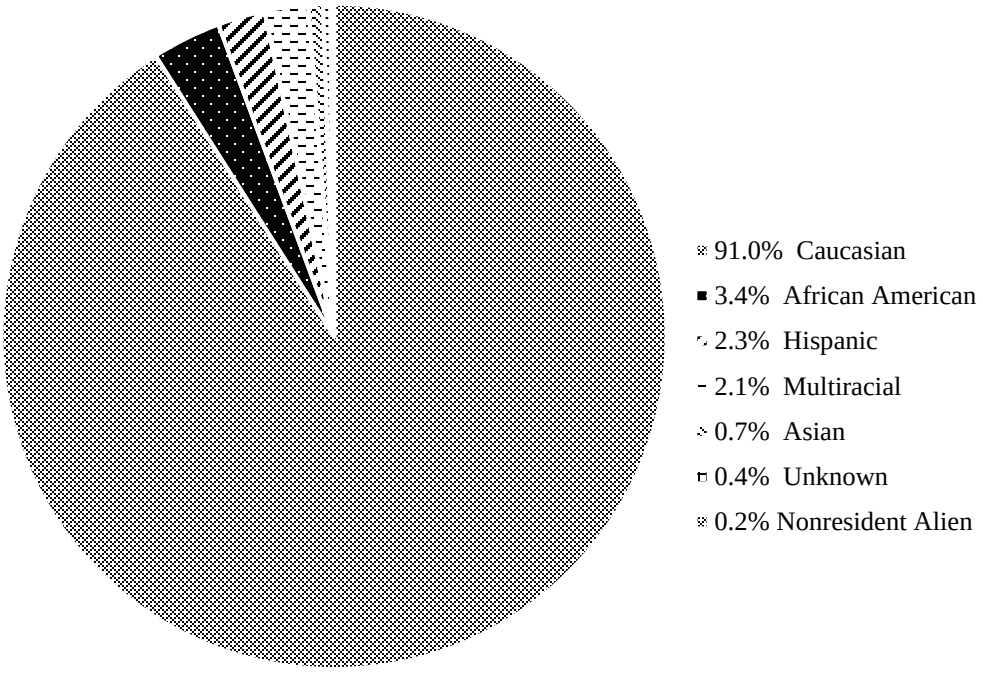

Figure 1. Ethnicity of entire sample population (N = 566).

One hundred forty-seven individuals (26.0%) self-identified as first-generation college students, meaning they potentially would be the first person in their family to graduate from a four-year institution. The average age of the sample was 18.3 years (*SD* = 0.984) ranging from 17 to 29. The mean high school GPA was 3.47 (*SD* = .462), with a minimum of 2.0 and maximum of 4.0. ACT scores ranged from 14 to 34, with a mean of 23.97 (*SD* = 3.994).

Table 2

Age and Pre-college Academic Demographics for Entire Sample (N = 566)

	M	*SD*	Minimum	Maximum
Age	18.3	.0984	17	29
H.S. GPA	3.47	.462	2.0	4.0
ACT	23.97	3.994	14	34

The mean college GPA at the students' last term of enrollment (regardless of graduation status) was 3.0 (*SD* = 0.882). Within this sample, 229 (40.4%) graduated within six years of starting college (or 18 semesters including summer sessions). Among those who graduated, 13 students (5.7%) graduated within three years, 137 (59.8%) in four years, 66 (28.8%) in five years, and 13 (5.6%) graduated in six years.

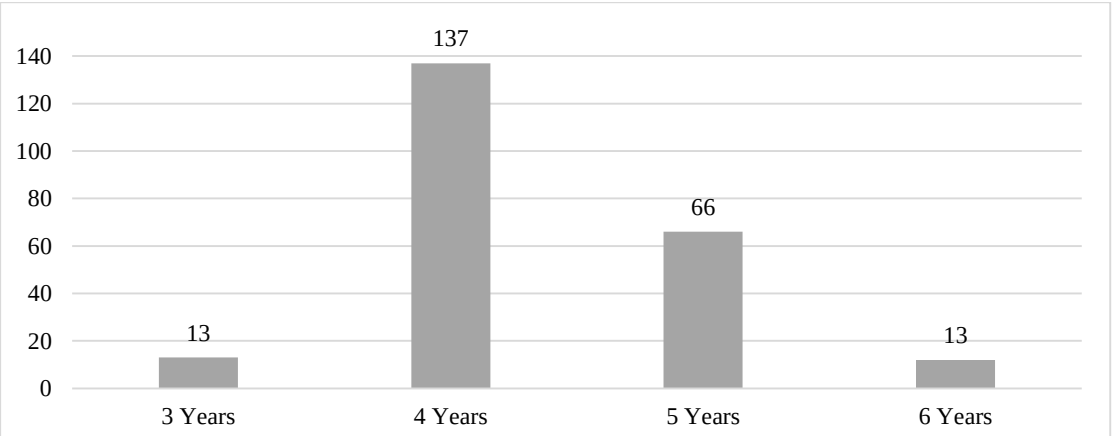

Figure 2. Graduation years of entire sample population.

The average scholarship award amount for those who received scholarships/grants (n = 517) was $16,780 ($SD$ = $14,018). This scholarship amount included federal and state grants along with any known merit and need-based scholarships as identified by the university's Financial Assistance department. The mean loan amount for students who attained loans (n = 303) was $21,337 ($SD$ = $16,636). Loan amounts consisted of all known student loans including Perkins, subsidized, unsubsidized, Parent Plus, and any other internal or external loans reported to the university's Financial Assistance department.

Table 3

Scholarship and Loan Amounts of Entire Sample Population

Type	*n*	*M*	*SD*
Scholarships	517	$16,780	$14,018
Loans	303	$21,337	$16,636

Between-Group Differences

Distinctions between those who took Personal Finance 161 and the sample group who did not are delineated as follows. Of the 283 students who took the personal finance course, 136 (48.1%) were females and 147 (51.9%) were males. Of the non-finance course group, 181 (64.0%) were females and 102 (36.0%) were males. The relationship between gender and personal finance course condition was significant, $X^2(1, N = 566) = 14.521$, $p < .0001$. In comparison to the total sample distribution, females were less likely to take the personal finance course.

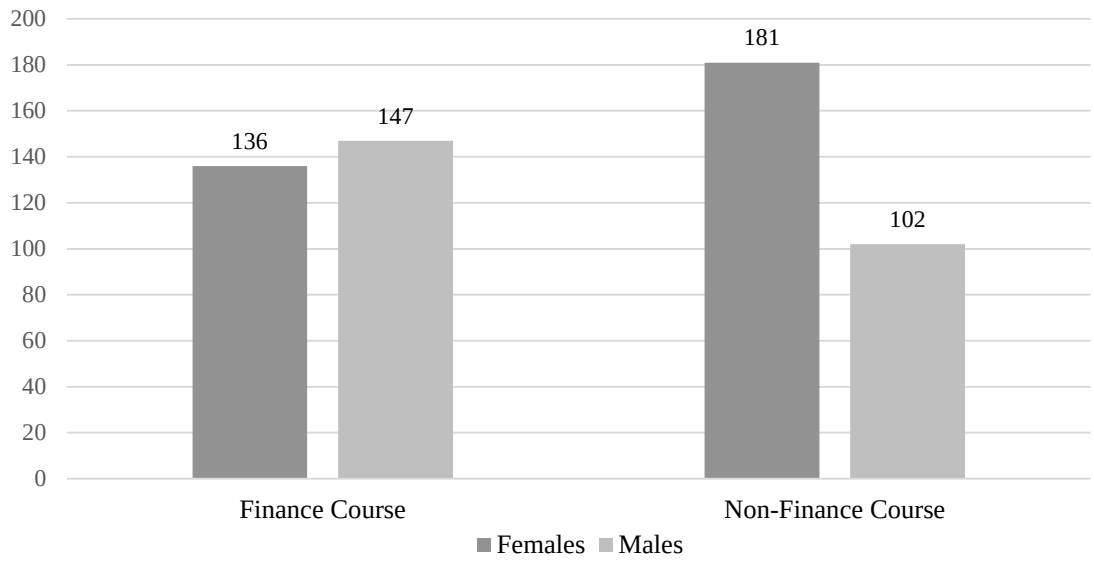

Figure 3. Gender by course condition.

A comparable number of first-generation status students enrolled in the personal finance course as compared to their counterparts. Chi-square analyses denoted no significant relationship between finance class condition and first-generation status, $X^2(1, N = 566) = 2.068, p < .150$. Of the 283 students who enrolled in the course, 66 (23.3%) identified as first-generation students. The non-finance class group consisted of 88 (31.1%) first-generation individuals.

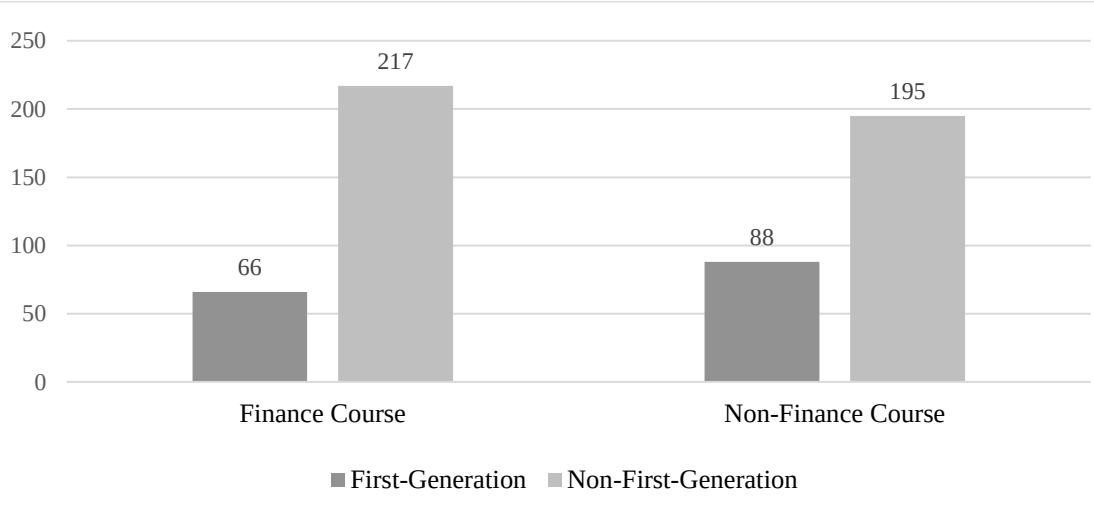

Figure 4. First-Generation status by finance course condition.

Distinctions in ethnicity can be observed between the two groups, as fewer minority students enrolled in the personal finance course. This relationship was found to be significant, $X^2(1, N = 563) = 7.309$, $p < .007$. Fifteen (5.3%) of the finance course participants identified as minority students compared to 33 (11.7%) in the non-finance course group.

Table 4

Comparison on Ethnicity by Course Condition

	Personal Finance 161		
	No	Yes	All
Caucasian	249	266	515
African American	15	4	19
Hispanic	6	7	13
Asian	3	1	4
Multiracial	9	3	12
Unknown*	1	2	3

*Students identified as unknown were not included as minorities.

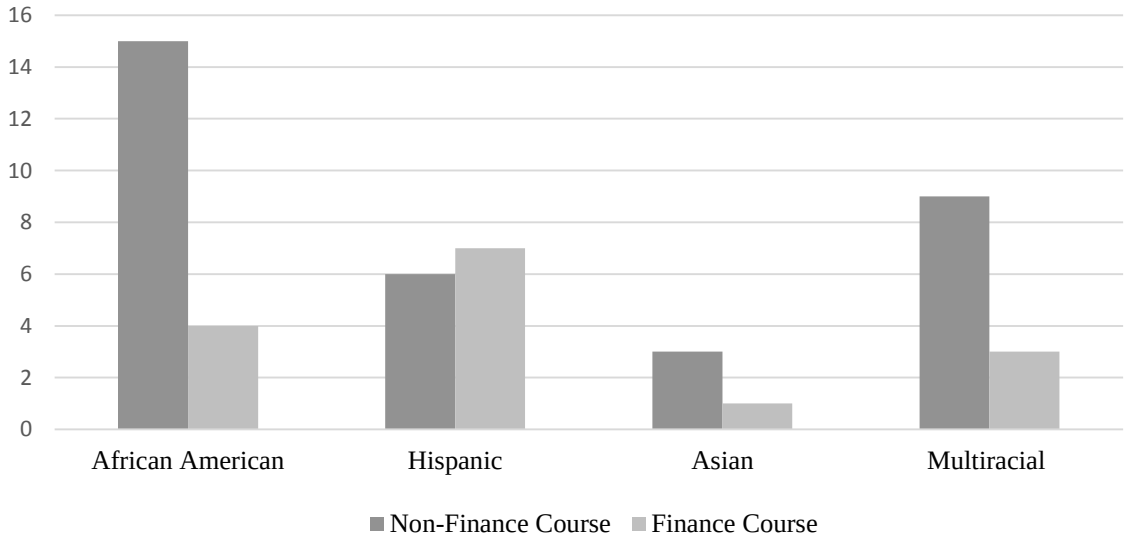

Figure 5. Minority status by finance course condition.

Individuals who took the personal finance course had a higher mean high school GPA as compared to the non-finance group. There was a significant difference in high school GPA when comparing the financial class group (M = 3.57, SD = .388) to the non-finance course group (M = 3.36, SD = .504); $t(561) = 5.748$, $p < 0.001$. Likewise, mean ACT scores between the two groups also were significant. Students who enrolled in Personal Finance 161 had mean ACT scores of 25.07 (SD = 3.845) as compared to the non-finance group with a mean score of 22.84 (SD = 3.833); $t(557) = 6.844$, $p < .0001$. While there were significant differences in GPA and ACT scores between the two groups, the nominal variance may be considered too negligible to be a factor in academic outcomes.

Table 5

Comparison of Pre-College Mean Academic Differences

Finance 161	High School GPA	High School ACT
No	3.36 (.504)	22.84 (3.833)
Yes	3.57 (.388)	25.07 (3.845)
All	3.47 (.462)	23.97 (3.99)

Differences in mean scholarship/grant amounts by term can be observed in Table 6. Terms are identified as years in school (e.g., term one is equal to the first three semesters including summer semester, term two is recognized as semesters four through six, etc.) Students who took Personal Finance 161 had comparable scholarship/grant amounts on average \$18,988 (SD = \$14,215) as compared to those who did not take the course \$14,232 (SD = \$13,369). Significant differences in mean scholarship/grant amounts were not found between students who enrolled in Personal Finance 161 and those who did not; $t(515) = 3.90$, $p < .059$.

Table 6

Comparison of Mean Scholarship/Grant Amounts by Term and Course Condition

Finance 161	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Total
No	$5,836	$5,808	$5,241	$5,813	$6,493	$6,670	$14,232
Yes	$5,813	$5,414	$5,589	$5,634	$7,541	$7,307	$18,988
All	$5,826	$5,612	$5,448	$5,703	$7,168	$7,101	$16,780

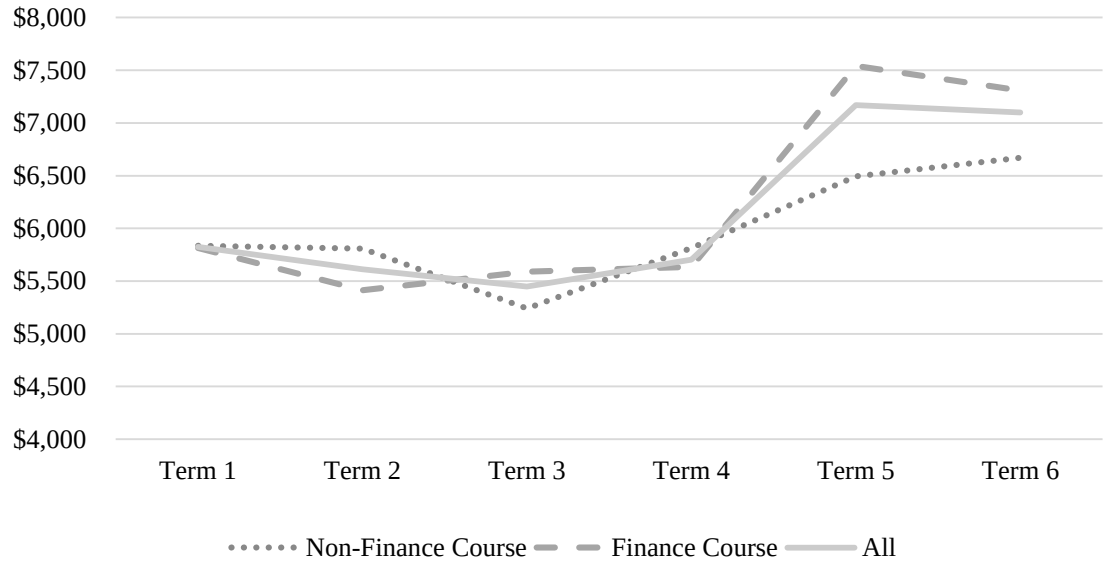

Figure 6. Scholarships/grants by term and course condition.

Testing of Hypotheses

Undergraduate GPA

The first hypothesis addressed the impact of an undergraduate personal finance course taken during the students' first or second term on final college GPA, first- and second-year retention rates, and graduation status. In order to assess the association of a college-level personal finance course on student academic success, an independent samples *t*-test was conducted to compare student final semester GPA (regardless of graduation status) on finance class and non-finance class conditions. There was a

significant difference in GPA when comparing the financial class group (M = 3.24, SD = .586) to the non-finance course group (M = 2.75, SD = 1.049); $t(559) = 6.834$, $p < 0.001$. The results indicate a higher final GPA (regardless of graduation status) for students who took Personal Finance 161 as compared to those who did not take the course.

First-year Retention

A Chi-square test of independence was performed to observe the relation between first-year retention rates and participation in a personal finance course. The relationship between these variables was significant, $X^2(1, N = 566) = 32.610$, $p < .0001$. Students in the finance class group were more likely to be retained after their first year of college (93.29%) as compared to students who did not take the course (75.97%). Note that not all students within the finance course group took Personal Finance 161 during their first term (first year) of college. To address this concern, a second Chi-square analyses was conducted which focused on the 163 students who took Finance 161 during their first term. A randomized sample of 163 individuals was obtained from the original 283 non-finance class group condition, which served as the comparison group. The relation between first-year retention rates and personal finance course condition was again found to be significant, $X^2(1, N = 326) = 8.1337$, $p < .0043$. Students who took Personal Finance 161 during their first term were more likely to be retained (89.57%) as compared to those who did not take the course (77.91%).

Second-year Retention

A Chi-square test of independence was conducted to observe the relation between second-year retention rates and personal finance course condition. This analysis included all 283 students who took Personal Finance 161 within the first six semesters of college

(first two years) and compared them with the sample of non-finance course students. The relationship between these variables was significant, $X^2(1, N = 566) = 38.808, p < .0001$. Of the 283 students who took the personal finance course within their first two years of college, 250 (88.34%) were retained after their second year. In comparison, 188 (66.43%) students within the non-finance course were retained after their second year.

Four-year Graduation Rates

The next set of analyses examined graduation rates for finance class verses non-finance class groups on four-, five-, and six-year graduation rates. A Chi-square test of independence was used to observe the relation between four-year graduation rates and participation in a personal finance course. The relationship between the variables was significant, $X^2(1, N = 566) = 4.390, p = .0361$. Eighty-six (30.39%) individuals who took Personal Finance 161 graduated within four years of starting college as compared to 64 (22.61%) students who also graduated within the same time frame but did not take the course.

Five-year Graduation Rates

Five-year graduation rates were similarly examined using Chi-square analyses to observe the relationship between graduation rates and personal finance course participation. The relationship between the variables was not found to be significant, $X^2(1, N = 566) = 2.426, p = 0.119$. Of the students who took the course, 117 (41.34%) graduated within five years in comparison to 99 (34.98%) students of the non-finance group. Significant differences were not found between graduation rates and class participation for students graduating within five years.

Six-year Graduation Rates

Finally, six-year graduation rates were analyzed to observe the relationship between graduation rates and participation in a personal finance course. The relationship between the variables was not found to be significant, $X^2(1, N = 566) = 1.650$, $p = .199$. One hundred and twenty-two (43.11%) students who took the finance course graduated within six years as compared to 107 (37.81%) who did not take the class. As a percentage of the total group, finance course participants accounted for 21.55% of those who graduated within six years compared to the non-finance class of 18.90%.

Loan Acquisition

The second hypothesis examined student financial status as observed through student loan amounts at the last semester of attendance regardless of graduation status. An independent samples *t*-test was conducted to compare loan amounts in finance class and non-finance class conditions. No significant difference was found for loan status for the financial class group (M = \$22,394.10, SD = \$15,502.30) and the non-finance class condition (M = \$20,428.80, SD = \$17,547.40) $t(301) = -1.03$, $p = .306$. These results indicate no significant differences in loan amounts between students who took Personal Finance 161 and students who did not enroll in the course.

Table 7

Comparison of Mean Loan Amounts by Term and Course Condition

Finance 161	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6	Total
No	\$7,549	\$7,755	\$7,956	\$8,982	\$9,108	\$9,714	\$20,429
Yes	\$7,474	\$8,780	\$7,923	\$7,895	\$8,725	\$8,696	\$22,394
All	\$7,522	\$8,162	\$7,939	\$8,403	\$8,907	\$9,148	\$21,337

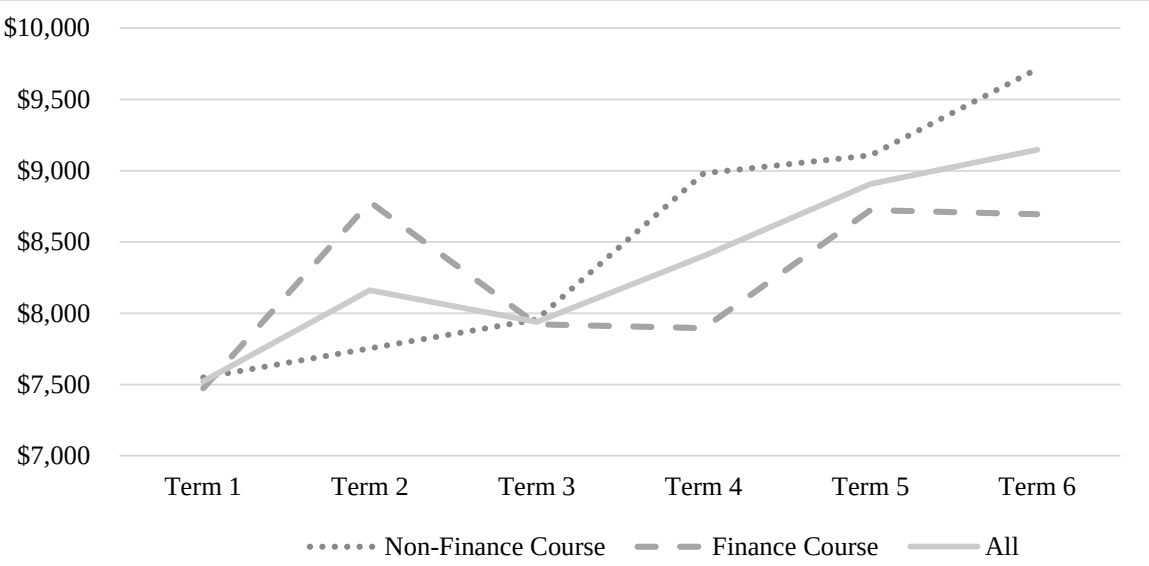

Figure 7. Loans by term and course condition.

Subgroups Six-year Graduation Rates

The last hypothesis postulated differences in six-year graduation rates within four subgroups when comparing finance class and non-finance class conditions. Four separate analyses examined the impact of a personal finance course on graduation rates among low-income students (as identified by Pell Grant eligibility), higher income students (non-Pell Grant recipients), and first-generation and non-first-generation college students.

Of the 566 students observed within the study, 182 (32.16%) were recipients of Pell Grant funds. Seventy-four (40.66%) of these individuals took the Personal Finance 161 course during their first two terms (first or second year) of college. Six-year graduation rates for this low-income group were analyzed to observe the relationship between graduation rates and participation in a personal finance course. The relationship between the variables was not found to be significant, $X^2(1, N = 182) = .0240$, $p = .8768$. Seventy-five students (41.21%) of the Pell Grant eligible (low-income) group graduated within six years. Of those who graduated within this low-income subgroup, 31 (41.33%)

had enrolled in the personal finance course as compared to 44 (58.67%) students who graduated but did not take the course.

Non-Pell Grant eligible (higher-income) students were evaluated to determine the relationship between six-year graduation rates and finance course condition. Three hundred eighty-four (67.84%) were identified as higher-income students. The relationship between the variables was not found to be significant, $X^2(1, N = 384) = 2.2547$, $p = 0.1332$. Within this non-Pell Grant eligible subgroup, 154 (40.10%) graduated within six years of starting college. Ninety-one (59.09%) of students within this group of graduates took Personal Finance 161 as compared to 63 (40.91%) who did not enroll in the course. Of the entire sample of 384 non-Pell Grant eligible individuals, 23.70% enrolled in the finance course and graduated. In comparison, 16.41% did not take the course but also graduated within six years.

Students who self-identified as first-generation individuals were examined to observe the relationship between finance class participation and six-year graduation rates. One hundred and forty-seven (25.97%) students were identified from the sample population as first-generation individuals. Of this group, 52 (35.37%) graduated within six years. Sixty-six students (44.90%) enrolled in Personal Finance 161 during their first two terms of college. The relationship between finance class condition and six-year graduation rates was not found to be significant, $X^2(1, N = 147) = 0.8466$, $p = 0.3575$. Of the 52 students who graduated and self-identified as first-generation college students, 26 (50%) had enrolled in the finance course.

The last group to be investigated included 419 (74.03%) students who self-identified as non-first-generation college students. Of this group, 217 (51.79%) enrolled

in Personal Finance 161 within their first two terms. One hundred and seventy-seven (42.24%) students graduated within six years. Examination of six-year graduation rates was conducted using Chi-square analyses to observe the relationship between graduation and personal finance course participation for non-first-generation college students. The relationship between the variables was not found to be significant, $X^2(1, N = 419) = .7351$, $p = 0.3912$. Of the 217 (51.79%) students who took the personal finance course, 96 (44.24%) graduated within six years. In comparison, of the 202 (48.0%) students who did not take the course, 81 (40.10%) graduated within six years.

CHAPTER V: DISCUSSION AND RECOMMENDATIONS

Introduction

As the cost of college continues to rise, an increasing number of students are assuming larger amounts of debt in order to afford a college degree. The average 2016 college graduate leaves their university with approximately $30,000 in student loans in addition to possible credit card debt. Aware of this growing concern for student financial well-being, many institutions of higher education have developed a variety of financial literacy initiatives to assist students in making sound financial decisions. Some of these initiatives come in the form of first-year orientation programs, workshops, online resources, peer-based mentoring, financial literacy and counseling departments, and college courses specifically designed to enhance individual financial literacy.

Previous studies have attempted to measure the knowledge gained from various financial literacy initiatives among numerous populations, including college-aged students (Anderson & Card, 2015; Bowles, 2017; Maurer & Lee, 2011). The majority of these projects focused on the acquisition of knowledge dispensed from these financial literacy efforts. This study, however, did not measure retention of financial literacy concepts, facts, or figures. This research examined the relationship of a college-level financial literacy course to collegiate academic success and financial status outcomes. Using quantitative analyses, this study examined the relationship of an undergraduate-level personal finance course on student academics, financial status, retention, and graduation rates. The following section provides an overview of the study, discussion of the results, limitations, recommendations for further research, and concluding thoughts and implications.

Overview of the Study

The purpose of this study was to examine the relationship of a college-level personal finance course on student academic success and financial well-being. The following research questions provided a framework for the study. First: To what extent does taking a college-level financial literacy course, during the first two terms of college (freshman or sophomore year) compared to not taking the course, result in improved academic outcomes as observed by: a) higher GPA at the end of the last term of attendance, b) increased first-year and second-year retention rates, and c) higher four-, five-, and six-year graduation rates? Second: To what extent does taking a college-level financial literacy course, during the freshman or sophomore year (compared to not taking the course), result in improved financial status as observed by mean decreased loan acquisition at the last semester of attendance? Finally: Are significant differences observed within subgroups that took a financial literacy course, when accounting for socioeconomic status (Pell Grant vs. Non-Pell Grant recipients) and first-generation status vs. non-first-generation status students?

Archival data of undergraduate first-time full-time, students from a midsize public university in the southcentral United States were collected with the assistance of the institution's Department of Financial Assistance and Office of Institutional Research. Prior to analyses, six key paring procedures were conducted in order to obtain a sample representative of the population. Individuals with the following criteria were removed from the dataset: (1) individuals who took Personal Finance 161 as a dual credit class; (2) out-of-state students; (3) athletic scholarship students; (4) students whose total scholarship awards were above the 95^{th} percentile; (5) individuals who received a D, F, or

withdrew from Personal Finance 161; and (6) only those who took the finance course during their first or second term (freshman or sophomore year) of college. After establishing these parameters, 283 individual remained in the sample group who took Personal Finance 161. Using a random sampling procedure, an additional 283 individuals were selected from the larger population to act as the control group. These 566 individuals were identified as the sample population and were analyzed for between- and within-group differences.

Discussion of the Results

Prior to testing of the hypotheses, significant demographic differences were found among students who took Personal Finance 161 as compared to those who did not. Significantly more females (64.0%) were represented within the non-finance group as compared to a relatively even gender distribution within the finance course group (48.1% female). Significantly fewer minority students (5.3%) were represented within the finance course group as compared to non-finance group (11.7%). Twenty-three percent of the finance course group identified as first-generation college students, with a comparable number of individuals (31.1%) within the non-finance course group. Pre-college data indicated significant differences between the groups in terms of mean ACT scores and high school GPA. Students who enrolled in Personal Finance 161 had significantly higher ACT scores (25.07) than their counterparts within this study (22.84). Likewise, high school mean GPA for the finance group was significantly higher (3.57) in comparison to 3.36 for the non-finance group. Finally, total scholarship/grant award amounts were not found to be significantly different between groups.

Hypothesis 1: Academic Success

The first hypothesis addressed the association of finance course condition on academic outcomes. It was hypothesized that taking a personal finance course within the first two terms of college (first two years) would result in improved college GPA, retention, and graduation rates. Data on college GPA; first- and second-year retention rates; and four-, five-, and six-year graduation rates were analyzed for between-group differences.

Final semester grade point average. A significant difference was found in mean college undergraduate GPA between the two groups. Students who took Personal Finance during their first two terms of college had significantly higher GPAs (3.24) at the end of their last term of attendance (regardless of graduation status) as compared to non-finance course condition students (2.75). Previous analyses on demographic differences indicated students within the finance course condition group had higher mean high school GPA and ACT scores. An argument could be made that the students within the finance course condition were more academically prepared than those within the non-finance course condition, as recognized by their higher mean high school GPA and ACT scores. Higher academic scores in high school are likely to translate to higher mean college GPAs and overall academic success. Research conducted by Westrick, Le, Robbins, Radunzel, and Schmidt (2015) supports this notion. However, further analysis of the sample population examining college graduation status in relation to mean high school GPA and ACT scores showed little to no impact on graduation rates.

First-year retention. First-year retention rates also were found to be significantly correlated with finance course condition students returning to college for

their second term (sophomore year) at higher rates than their counterparts within the study. Ninety-three percent of the students who enrolled in Personal Finance 161 continued at the same university as compared to the non-finance group (76.0%). Note that not all the students within the finance course condition took Personal Finance 161 during their first term. Further analysis homed in on the students who took the course during their first term (n = 163) and compared them to a randomized sample of non-finance course condition individuals. Again, significant differences were found between the two groups, with students enrolled in the course (during their first term of college) 11.7% more likely to return to the same institution for a second term.

Second-year retention. Analysis of second-year retention rates also indicated significant differences, as more finance course condition students returned to the same university as compared to their counterparts. Sixty-six percent of the students within the non-finance course condition returned for a third year as compared to 88% of those who took the course during their first two terms of college. Higher first- and second-year retention rates among students who took Personal Finance 161 may indicate a potential impact of financial literacy at the collegiate level. A primary barrier to obtaining a four-year degree is the substantial cost of attendance. These results may suggest that students who took the course may have been better prepared to address the financial barriers associated with the cost of college, thus leading to increased retention rates as observed within this study. Students enrolled in Personal Finance 161 are taught practical skills for budgeting, which may contribute to their financial well-being and ability to plan and save for future expenses.

Four-, five-, and six-year graduation rates. Students who enrolled in Personal Finance 161 had significantly higher four-year graduation rates (30.4%) as compared to those who did not take the course (22.6%). However, further analyses on five- and six-year graduation rates showed no significant differences between the two groups. While enrollment in the personal finance course may not be associated with increased graduation rates at the fifth and sixth year, higher rates within four years may suggest an impact of a personal finance course. Students who took the course during their first or second term of college may have been motivated by the financial gain of graduating as early as possible. An increased knowledge of personal finance and the incorporation of budgeting skills may have played a part in students' ability to overcome the barriers associated with paying for college in order to graduate in four years.

Hypothesis 2: Financial Status

The second hypothesis examined student financial status as observed by mean student loan amounts at the end of the last semester of attendance. It was hypothesized that students who enrolled in Personal Finance 161 would have lower mean loan amounts as compared to non-finance course individuals. Contrary to the hypothesis, no significant differences were observed in loan acquisition between finance course conditions, as reported by the university's Office of Financial Assistance. Students, regardless of whether they enrolled in a personal finance course, acquired nearly the same average amount of student loans. This result supporst research by McCarthy (2015), who also found that financial literacy is not a factor in student loan acquisition or credit card use.

One limitation of this analysis may be important to note. Some students may have accepted loans not reported to the Office of Financial Assistance. This study

analyzed all known student loans. It is possible for students to have acquired personal loans from family members and/or financial institutions that would not be reported to the university. Additionally, this data do not include credit card debt, a tool used by more and more students to pay for college expenses. Some students, especially those within a lower socioeconomic status, may take advantage of all the student loan options available, yet still come up financially short. These students often turn to credit cards to bridge their underfunded college education.

Hypotheses 3: Six-Year Graduation Rate within-Group Differences

The third hypothesis evaluated potential differences in graduation rates among four different subgroups: first-generation, non-first-generation, Pell Grant recipients (low-income), and non-Pell Grant recipients. Four separate analyses were conducted measuring six-year graduation rates for each subgroup, with the finance course condition as the independent variable. It was assumed there would be differences in six-year graduation rates for those who took Personal Finance 161 as compared to those who did not take the course. Contrary to the hypothesis, no significant differences in six-year graduation rates were observed in any of the four subgroups in relation to finance course condition. Regardless of a student's first-generation status or family income status (as designated by Pell Grant eligibility), taking a personal finance course resulted in no significant difference in six-year graduation rates.

It should be noted that the data concerning Pell Grant and first-generation status may not be a precise representation of the population. The indication of first-generation status is a self-reported measure. Discrepancies are likely to exist, as some students may not understand the terminology or simply choose not to select a classification.

Additionally, Pell Grant eligibility may not be a completely accurate assessment of financial status, as some students and families choose not to complete the Free Application for Federal Student Aid (FAFSA) even though they may qualify for financial assistance. Furthermore, while the FAFSA requires specific tax information from applicants, some information within the application requires detailed financial disclosures that may be purposefully or accidentally withheld, thus affecting Pell Grant status. Nonetheless, implementation of a randomized sampling procedure was used to provide the most reasonable and accurate measure of first-generation and low-income status.

Limitations

While this research provides insight into the relationship of a college-level financial literacy course on academic and financial status, additional limitations (beyond those previously mentioned) are identified. The following section outlines some of these limitations and their possible impact.

First, the same professor developed and taught all sections of the Personal Finance 161 course at the center of this study. No other instructor taught this particular course at the institution for the duration of this research project. This could be viewed as a strength because it minimized the disparity in teaching effectiveness, grading, and overall dissemination of information. Equally so, some may consider it a weakness, as the course is reliant on a single professor's ability to develop the curriculum and educate one's students. Additionally, course content and structure may have changed over time as the professor developed the syllabus and framework of the course, thus affecting retention of financial information.

Second, this study did not survey students' exposure to financial literacy education prior to or during their college career. Students may have been exposed to money management instruction and support systems prior to and during their time in college. Financial counseling services, orientation programs, and workshops were available to all university students at the time of this study. It is plausible that students may have received additional financial instruction apart from the Personal Finance 161 course. This additional personal finance education could have had an impact on the students' personal money management activities.

Another limitation is the scope of research conducted. This project did not measure financial literacy itself but relied on the assumption that students within the finance course condition gained only knowledge of personal money management through the course. Furthermore, it was assumed these students translated this newfound knowledge into positive financial behaviors. A study by Mandell and Klein (2009) did not support this expectation of financial information translating into healthy financial behaviors. High school students who participated in a finance course did not exhibit better financial behaviors, nor were they more financially literate, as compared to students who did not participate in a money management course. A measurement of financial literacy (other than the student's course grade) was not included within this study. While financial education was a core component of the study, measurement of financial literacy itself was not assessed.

Finally, this study was limited to academic and economic outcomes as measured by college GPA, retention, graduation status, and economic status. Many additional factors contribute to a student's academic success or lack thereof. The researcher did not

survey students concerning these factors that may have affected academic progress or economic status, nor did this study have access to data concerning students who transferred to other universities. Expanded analyses of the factors that contribute to and detract from academic success may produce more robust results relating to the impact of financial literacy among college students.

Recommendations for Continued Research

Continued research on financial literacy initiatives at the collegiate level and their relationship to academic and economic outcomes are warranted. Results from this project suggest a potential benefit of financial literacy education on college retention rates and overall GPA, in addition to increased four-year graduation rates.

Many studies have attempted to assess financial literacy among various populations (Huston, 2010; Lusardi & Mitchell, 2007; Mandell, 2008); however, few have examined the specific economic and academic influence these initiatives have on college students. In consideration of the rising expense of a four-year degree, pathways to reducing and minimizing that cost have become an imperative. The following recommendations are suggested for future research.

First, this study was limited to examining loan amounts as reported by a university's Department of Financial Assistance. Expanding upon the data concerning how students are paying for college may help to provide researchers with a better understanding of student money management activity in relation to collegiate-level financial literacy initiatives. For example, many students possess multiple credit cards and carry sizable balances (Norvilitis, 2014; Norvilitis, Szablicki, & Wilson, 2003; Sallie Mae, 2009; Solis & Ferguson, 2017). Other students may be procuring loans from family

members, friends, and sources outside of the scope of this study. Using surveys to collect detailed financial information may provide researchers with more accurate descriptions of students' financial behaviors. Examination of these behaviors and trends may provide researchers with a more accurate assessment of student money management activity. Incorporating this information into the framework of a study, which investigates the impact of a financial literacy course (or other financial literacy initiatives) on student financial behaviors, likely would provide researchers with a more detailed picture of the relationship it has with academic outcomes and economic well-being.

Second, many universities are providing their students with financial literacy opportunities to promote healthy management behaviors. These initiatives come in the form of for-credit courses, online resources, workshops, and individual financial counseling. Measuring the relationship of each of these programs on student academic success and financial status may be beneficial for producing services with the greatest impact. Numerous studies have attempted to measure student financial literacy, but few have assessed potential academic and economic outcomes of specific interventions.

Third, exposure to financial literacy initiatives may not have an immediate impact on individuals, as noted in studies by Mandell and Klein (2009) and Fernandes, Lynch, and Netemeyer (2014). However, other research points to the potential long-term benefits of financial literacy initiatives (Howlett, Kees, & Kemp, 2008). This study showed no significant differences in student loan amounts between finance and non-finance course conditions. However, the long-term impact of personal finance education may produce greater results as graduates become gainfully employed and are faced with new and important personal money management decisions. Longitudinal studies

comparing students who took a personal finance course at the collegiate level as compared to those who did not may produce important information as to the importance of such endeavors.

Finally, surveys focused on student perceptions of their experiences in personal finance courses (or other delivery systems) may provide researchers with pertinent information concerning how students incorporate lessons into practical economic behaviors. Cognitive assessments concerning delayed gratification and goal setting may contribute to a greater understanding of student economic and academic motivations. Integration of these factors into financial literacy research may help identify specific variables, that promote academic success and persistence. With qualitative and quantitative analyses, instructors may strengthen course content and pedagogical techniques to promote healthy financial decision making.

Implications

This study contributes to the ever-growing body of literature concerning financial literacy and its relationship to college student academic success and economic well-being. The increasing cost of higher education has become a considerable barrier for many who endeavor to obtain a four-year degree. Colleges and universities strive to minimize the cost of tuition, fees, room, and board; however, diminished or stagnant state/federal funding has forced the majority of postsecondary institutions to increase their cost of attendance, outpacing current cost of living rates. Furthermore, financial aid for those in need has not kept pace with this rising cost, leaving many who desire a college degree lacking sufficient funding. In turn, students are procuring large amounts of student debt by means of loans and credit card usage. Aware of the growing concern

for student financial well-being, many postsecondary institutions have offered personal money management initiatives and instruction meant to increase financial literacy. By providing these educational opportunities and services, universities hope to increase their students' ability to manage their personal finances, thus decreasing their overall cost of attendance. This study focused on one of these initiatives by examining the relationship between a for-credit undergraduate personal financial literacy course on student academic success and economic well-being.

Results from this study indicate a relationship between a college-level personal finance course and specific academic outcomes. Students who enrolled in Personal Finance 161 within the first two terms of their college career showed higher first-year and second-year retention rates as compared to those who did not take the course. Through course enrollment, individuals may be better poised to manage their personal finances and navigate the complexities of financial aid, student loans, housing, and other personal money management concerns. Postsecondary institutions strive to increase retention as students continuously drop out due to financial barriers. Data from this study indicate a credible tool universities may use to help students develop immediate financial skills to address money management needs.

In addition to increased retention rates, four-year graduation rates were significantly higher for those who took Personal Finance 161. Students enrolled in this course early in their college career may have learned of the economic benefits of graduating within four years. Spending less time in school decreases student loans and allows students to enter the workforce earlier, thus increasing their long-term financial income. While significant differences between finance course conditions were found in

four-year graduation rates, this was not observed with five- and six-year rates.

College GPA at the end of the last semester of attendance also was significantly higher for students who took the personal finance course as opposed to those who did not. By taking the course, these individuals may have developed a stronger drive for academic success, which may eventually lead to greater economic well-being. Preparing for the future and economic goal setting is a significant focal point of Personal Finance 161. Enrollment in this course may have enhanced the students' sense of delayed gratification, challenging them to increase academic performance.

Differences in total loan amounts were not found to be significant between finance and non-finance course conditions. Taking a personal finance course does not seem to be a factor on the amount of student loans individuals acquire based on the data in this study. This may be a result of necessity in consideration of the increasing cost of college. Many students, regardless of whether they took a money management course, relied on student loans to pay for their education and had no other recourse. Additionally, since five- and six-year graduation rates were not significantly different for the separate class of students, loan acquisition was likely to follow the same pattern.

Finally, no significant differences were found within each of the four subgroups (first-generation, non-first-generation status, Pell Grant eligible, and non-Pell Grant eligible) concerning six-year graduation rates and finance course condition. Six-year graduation rates for first-generation students who enrolled in the personal finance course were not significantly different from those who did not take the course. The same results were found for the other three subgroups of non-first-generation status, Pell Grant

eligible, and non-Pell Grant eligible students concerning six-year graduation rates and finance course condition.

Recommendations and Conclusion

In light of the results of this study, institutions of higher education are likely to benefit from offering or requiring students to enroll in a personal finance course at the start of their collegiate career. Increased financial knowledge may be a contributing factor to higher student retention and four-year graduation rates. At a minimum, universities should recognize the necessity of financial literacy initiatives focused on helping students manage their personal finances, minimize student loans, and graduate students as expediently as possible.

As student debt continues to increase, governing institutions have begun to set expectations concerning financial education at the collegiate level. The Southern Association of College and Schools, Commission on Colleges included within their 2018 Principles of Accreditation the expectation for increased student financial literacy. "The institution provides information and guidance to help student borrowers understand and how to manage their debt and repay their loans" (p. 99). A growing number of students rely on loans to fund their education with little knowledge of how these financial decisions will affect their economic future. The majority of young adults entering college have nominal experience with personal money management, yet are expected to make major financial decisions. Postsecondary institutions concerned for their students' financial well-being are grappling with the ethical and moral implications associated with student debt. By providing or requiring students to enroll in a personal finance course at the onset of their collegiate career, universities may not only increase retention and four-

year graduation rates, but provide students with an essential foundation for future economic stability. Increased retention and persistence rates likely will lead to increased graduation rates. With a college degree in hand, these individuals will be better positioned to pay off their student loans without entering deferment or becoming delinquent.

Consideration of other financial literacy delivery systems also is suggested as postsecondary institutions strive to minimize student debt and increase retention and graduation rates. Institutions may consider providing financial education initiatives to address student needs at particular stages of their education. Workshops, courses, or personal financial counseling focused on loans, debt, and personal money management skills for incoming students may provide students with a pathway to minimize economic barriers to persistence. Likewise, specific financial education curriculums and initiatives for graduating students may enhance money management skills necessary for the development of long-term financial goals as they prepare to enter the workforce. Addressing student financial needs at particular life stages may be a catalyst to overall economic well-being and life satisfaction. Financial competence and healthy financial behaviors are core requirements that lead to successful living.

In conclusion, this study provides additional insight to the general research regarding financial literacy and its relationship with academic success and economic well-being among undergraduate college students. Financial literacy and subsequent positive financial behaviors are not likely to be learned via a single workshop, counseling session, or semester-long, college-level course. Financial literacy is an ongoing process that requires the individual to take an active role in one's own economic well-being.

Universities providing students with financial education and training not only increase academic success, but also may lay the groundwork for future economic well-being. Exposure to financial literacy initiatives through a variety of platforms may result in a more educated and solvent society, leading an individual to a higher quality of life.

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APPENDIX

INSTITUTIONAL REVIEW BOARD
OFFICE OF RESEARCH INTEGRITY

DATE:	July 3, 2017
TO:	Brian Brausch
FROM:	Western Kentucky University (WKU) IRB
PROJECT TITLE:	[1088116-1] Financial Literacy and College Student Success (Dissertation)
REFERENCE #:	IRB 17-483
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	July 3, 2017
REVIEW TYPE:	Exempt from Full Board Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission regarding de-identified data analysis. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Exempt from Full Board Review based on the applicable federal regulation.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.

This project has been determined to be a Minimal Risk project.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wku.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Western Kentucky University (WKU) IRB's records.