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EFFICACY OF A FINANCIAL LITERACY PROGRAM AMONG COLLEGE STUDENTS

A Thesis by

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Bachelor of Arts, Wichita State University, 2011

Submitted to the Department of Counseling, Educational and School Psychology
and the faculty of the Graduate School of
Wichita State University
in partial fulfillment of
the requirements for the degree of
Master of Education

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EFFICACY OF A FINANCIAL LITERACY PROGRAM AMONG COLLEGE STUDENTS

The following faculty members have examined the final copy of this thesis for form and content, and recommend that it be accepted in partial fulfillment of the requirement for the degree of Master of Education with a major in Educational Psychology.

Marlene Schommer-Aikins, Committee Chair

Jean Patterson, Committee Member

Mara Alagic, Committee Member

DEDICATION

To my family for supporting and encouraging me as I pursue my dreams. To my mother, Amy Rundquist, for cultivating a love of education in me. To my father, Max Holthaus, for demonstrating the value of hard work and dedication. To my grandparents for their commitment to education, providing future generations the ability to dream bigger and reach higher. To my friends for their continual support and belief in me. To the educators who invested in me along the way.

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At the culmination of my thesis, I would also like to thank my committee members, Dr. Mara Alagic and Dr. Jean Patterson, for their guidance in the exploration of this research. Your contributions to this project have been invaluable.

ABSTRACT

The purpose of this study was to examine the efficacy of a financial education program, MyCollegeMoneyPlan.org, in enhancing student financial competency and well-being. One hundred and eighty-one students in an introductory course at an urban Midwestern university participated in a financial literacy study in a first-year seminar course. Measures were taken to assess financial competency and financial well-being among pre and post-test conditions, as well as among age and gender of participants. Descriptive statistics were presented and discussed. Results were analyzed using Stepwise Regressions, Analyses of Variance, and one-sample t-tests. Financial competency scores significantly increased following the intervention, while financial well-being scores did not differ significantly. Gender and age differences in financial well-being levels were consistent with current research. Research findings and implications for future research were discussed.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION	1
Rationale	1
Definition of Financial Literacy	4
Purpose	7
Overview	7
Research Problem	8
II. LITERATURE REVIEW	9
Overview of the Need for Financial Education	9
College Attainment Rates	9
Government Support	10
Rising College Costs	11
Student Loan Debt	12
Student Loan Default	13
Student Financial Literacy	14
Financial Competency	14
Experience with Finance	16
Gender Differences	17
At-Risk and Minority Students	18
Financial Modeling	19
University Support	19
Measuring Financial Literacy	20
Teaching Financial Education	20
Financial Literacy Assessments	21
Results of Financial Literacy Instruction	22
III. METHODS	24
Purpose of Study	24
Participants	24
Assessments	25
Financial Competency Questionnaire	25
Financial Well-Being Questionnaire	26
Demographic Information	27
Procedures	28
Study Proposal	28
Survey Participation	28
Course Instruction	29

TABLE OF CONTENTS (continued)

Chapter	Page
Conclusion of the Evaluation	29
Data Analysis	29
IV. RESULTS	31
Descriptive Statistics	31
Major Analyses	31
Exploratory Ancillary Analyses	32
V. DISCUSSION	34
Context of the Study	34
Reflections on the Results	34
Limitations of the Study	37
Future Research	38
REFERENCES	40
APPENDICES	50
A. Financial Competency Pre and Post-Test	51
B. Personal Financial Wellness Scale	54
C. Financial Literacy Online Survey	56
D. Wichita State University Institutional Review Board Application	62
E. Class 1 Lesson Plan	70
F. Class 2 Lesson Plan	71
G. Class 3 Lesson Plan	72
H. Descriptive Statistics of Major Variables	73
I. Correlations Among Major Variables	74

CHAPTER 1

INTRODUCTION

Rationale

The overall purpose of this study is to evaluate the efficacy of teaching financial literacy to college students. Financial literacy has been identified as one of two major predictors of college completion (Cliff, 1962; Habley, Valiga, McClanahan, & Burkum, 2010; Iffert, 1967), and is therefore a critical area of study in terms of student success.

In one generation, the United States has fallen from first to fourteenth place in international rankings of educational attainment among young adults (Schleicher, 2012). Once a world leader in postsecondary degree completion, Americans aged 55-62 completed college at 42%, compared to an average of 24% of citizens in other developed countries around the world (Schleicher, 2014). The number of young adults attaining higher education degrees in the United States has not increased significantly in recent years, however. With 44% of young adults going on to complete some form of postsecondary education in the United States, countries such as Korea are quickly outpacing the U.S., with 66% of citizens aged 25-34 achieving tertiary education (Schleicher, 2014). Higher education completion rates increased by an average of 11% between 2000 and 2012 among all other developed countries, while the United States' rose by just 7% during this time (Schleicher, 2014).

Although the United States has maintained, and even slightly increased college graduation rates in recent years, the increasing use of technology has heightened the demand for skilled laborers beyond previous levels. A recent study by Georgetown University reports that virtually all job growth following the 2007 recession has been in fields requiring higher levels of education (Anderson Weathers, 2012). Since the early 1970's, jobs requiring some form of postsecondary education have nearly quadrupled (Carnevale, Smith, & Strohl, 2010). Researchers from Georgetown also report that,

“since the early 1970s, the American economy has transformed from one that featured more jobs for high school dropouts than for college graduates, to one where the share of jobs for dropouts has plunged from roughly one-third to 11% (Carnevale et al., 2010, p.14). By 2020, it is projected that 35% of jobs will require a bachelor’s degree or higher, and an additional 30% will require some college or an associate’s degree (Office of the Press Secretary, 2015). To meet employment needs by 2018, it is estimated that colleges and universities will need to award an additional three million degrees, or increase completion rates by 10% annually (Carnevale et al., 2010). Consequently, a great deal of focus has been placed on increasing college access and completion rates in recent years.

While 80% of high school graduates enroll for college within two years of graduation (Ross et al., 2012), only 19% of full-time students will complete their college degree at most four year public universities (Complete College America, 2014¹; Lewin, 2014). Although six year college graduation rates are higher, at 57% (de Nies, 2010; Leonhardt, 2009), college costs rise by \$15,933 for every extra year of a public two-year college, and \$22,826 for every extra year at a public four-year college (Complete College America, 2014²; Lewin, 2014). Completing a college degree in six years, as opposed to four may increase college costs by as much as 50%, contributing to higher student debt loads. Further exacerbating the problem, students graduating in six years versus four lose an average of \$45,327 in additional earnings during this time (Complete College America, 2014²). With the high cost of delaying graduation, and the increasing demand for college educated employees, researchers have begun to ask what barriers students face in completing their degree on time.

In a 2010 study by ACT, chief academic officers at universities across the country identified leading causes of student attrition in college. The two leading factors cited for student withdrawal from the university were (1) a lack of financial resources and (2) academic underpreparedness (Habley et al., 2010). Although these factors were identified by chief academic officers as equally important in

college success, further research demonstrates that student debt levels and financial stress are also key predictors of academic difficulty and reenrollment (Pleskac, Keeney, Merritt, Schmitt, & Oswald, 2011).

With 80% of undergraduates working while in college (Riggert, Boyle, Petrosko, Ash, & Rude-Parkins, 2006), and one in five students working more than 35 hours a week (O'Shaughnessy, 2013), it is easy to understand the impact one's financial situation may have on academic success. Research demonstrates higher grade point averages (Dundes & Marx, 2006) and retention rates (Perna, 2010) for students who work 20 hours a week or less. A report from the American Association of University Professors supports these findings, as faculty note that juggling work and school creates higher levels of stress and anxiety among students, making it less likely that they will complete their degree (Fang, 2013; Perna, 2010). Indeed, 70% of students who withdrew from college reported doing so in order to "work to support themselves", and 52% of students stated that they did so because they could not afford the tuition and fees (Johnson, Rochkind, Ott, & DuPont, n.d.).

While financial resources have long been identified as a predictor of student success, relatively little has been done to address financial literacy or money management for students in higher education (Money Matters on Campus, 2013). Although 76% of students wish they had more help in planning for their financial future (Rekow & Lefland, 2007), and 76% of parents believe schools should be required to teach money management skills (Visa, 2005), university programming in this area is lacking.

Robert Kiyosaki, co-author of the leading personal finance book, "Rich Dad, Poor Dad", states that, "Academic qualifications are important and so is financial education. They're both important, but schools are forgetting one of them" (Yusufov, 2014). Indeed, while 97% of universities offer tutoring services, 90% have a writing lab or center on campus, and 84% provide a library orientation, just 53% of universities offer any form of money management workshop(s) to their students (Habley et al.,

2010). Of the institutions that do offer money management programming, nearly half of them receive no funding, and of those who do receive funding, 31% have a budget of \$5,000 or less (Trombitas, 2012). Limited financial resources for money management education has caused many universities to seek out cost-effective methods of implementing programming onto their campuses, such as online educational programs (Trombitas, 2012).

Definition of Financial Literacy

In studying how to help students obtain financial literacy, we must first define the concept and how it may be measured. Financial literacy has been defined in many different ways, depending on the goals and purpose of the financial education provided. These goals may vary widely, corresponding to the content intended to be taught, or the audience's ability to implement educational principles learned. For example, a child's age and level of development may have a great influence on the type of financial education provided. The anticipated outcomes of the financial education may also influence how it is measured. Intending to cause gains in knowledge or awareness of money management principles may differ from definitions that center on behavioral changes that result in effective financial education.

Definitions of financial literacy may include areas such as gaining "(a) a specific form of knowledge, (b) the ability or skills to apply that knowledge, (c) perceived knowledge, (d) good financial behavior, and even (e) financial experiences" (Hung, Parker, and Yoong, 2009, p. 3).

While modest definitions of financial literacy exist, such as, "a basic level of knowledge and the tools to manage one's financial affairs and decisions" (Coleman, n.d., p. 2), other definitions are more complex and define measurable outcomes. For example, the Financial Industry Regulatory Authority defines financial literacy as, "the understanding ordinary investors have of market principles, instruments, organizations and regulations" (Financial Industry Regulatory Authority, 2003, p. 2).

In defining financial literacy for college students, it is necessary to not only consider the curriculum that will be taught, but also the anticipated outcomes of the education for the population served. For example, groups such as the Jump\$Start Coalition have defined financial literacy for high school students using concepts such as income, investing, credit, spending, money management, and students' skills and knowledge in these areas (Lucey, 2005). Research finds relatively poor outcomes on Jump\$Start surveys among high school students, however (Mandell, 2008). Although these assessments are intended to measure national standards in teaching financial literacy education, many students may not be receiving adequate or developmentally appropriate financial education enabling them to perform well on these assessments. Questions measuring these constructs appear to have social bias and may not be an adequate measure of student financial literacy (Lucey, 2005). Survey findings reveal that students may have varying levels of personal experience in learning about investing, taxes, health insurance, and credit (Lucey, 2005). In reviewing the national Jump\$Start surveys, Thomas Lucey, recommends that survey topics should be applicable to all participants, and should not demonstrate bias towards students having particular experiences or holding a particular socioeconomic status (Lucey, 2005).

In addition to having social bias, these instruments may not measure a level of education that is obtainable by students at their current developmental stage. While many of these topics may be important for individuals to learn about over their lifetime, they may not yet be relevant for all high school students. While some students may plan to enter the workforce immediately following graduation, the vast majority of high school graduates will go on to college within two years (Ross et al., 2012). Incoming college students may not yet be focused on topics such as retirement or business taxes, as these issues may not yet impact their lives. Students at this stage are, however, experiencing a great deal of stress regarding how they will finance college (StudentPoll, 2011), so financial topics of

interest may center on managing student loan debt, budgeting for college, and understanding credit cards, for example (Money Matters on Campus, 2013). While younger students may not demonstrate interest in financial topics such as household budgeting, retirement planning, and mortgages, college seniors may benefit from education in these areas (Money Matters on Campus, 2013). It is therefore important to consider student interest in financial topics when developing and assessing educational programming.

Additionally, many of the concepts traditionally used to measure financial literacy may depend on other skill development, such as numeracy (Hung et al., 2009). It is therefore important to distinguish between numeracy skills and general financial knowledge. While a student may have the ability to calculate an interest rate, they may not have an appropriate understanding of the best type of loan to take out, for example. And while some individuals may not have the ability to calculate an interest rate on a loan, they may have general knowledge on the sources that will provide them with the best loan terms with flexible repayment plans.

Financial literacy measures often consider knowledge development along with one's abilities to work with numbers, which may unintentionally measure general cognitive functioning (Hung et al., 2009) or training in a particular area such as math (Hung et al., 2009) or business (Shim & Serido, 2011). Students taking finance classes in college also tend to score higher on measures of financial literacy (Shim & Serido, 2011). It is important to consider these factors in defining measures of financial literacy to gain an accurate depiction of a student's knowledge and abilities. Questions that may be impacted by one's ability to complete a calculation or draw upon one's knowledge in business should therefore be avoided in survey development.

Hung, Parker, and Yoong define financial literacy as having "knowledge of basic economic and financial concepts, as well as the ability to use that knowledge and other financial skills to manage

financial resources effectively for a lifetime of financial well-being” (2009, p.11). Because this definition is broad in nature and allows for changes in financial literacy throughout various developmental stages, it will be adopted for the purposes of this study. Financial literacy will therefore be measured using constructs developed to assess financial competency and well-being.

Purpose

The purpose of this research is to determine whether undergraduate students who participate in the free online course, MyCollegeMoneyPlan.org, exhibit any gains in financial literacy as a result of participating in the course and associated in-class activities.

Participants engaging in the online financial education course received important information aimed to help them to make smart financial decisions while enrolled in college. The content of the online course and corresponding teaching resources were designed to improve the financial literacy of college students. This evaluation measures any gains in financial competency, as well as any changes in reported financial well-being levels that participants experienced as a result of engaging in the online course. This research also provides outcomes for data-informed decision making among schools considering adopting the online program into first-year seminar courses.

Overview

This study explores the efficacy of a financial literacy program in enhancing college students’ financial competency and well-being. In chapter two, an overview of research regarding student financial literacy and college success is given. Beginning with issues of college retention, the need for financial literacy in higher education will be explored. The chapter develops into a more detailed explanation of financial literacy among college students and areas for consideration in this study. Chapter two continues, analyzing current financial literacy efforts, results from educational programming, and future work to be done in the field.

Chapter three introduces the research questions explored in this study, as well as the methodology employed. Descriptions of participants, survey instruments, data collection, and methods used in data analysis are presented. Chapter four reviews pre and post-test results and quantitative analyses conducted in this study. Chapter five contains a discussion of the results, implications of the study's findings, limitations to the study, and suggestions for future research.

Research Problem

This study proposes to investigate the following research questions regarding financial competency and well-being:

- a) Does Financial Competency (FC) correlate with Financial Well-Being (FWB) before instruction?
- b) Does FC correlate with FWB after instruction?
- c) Does FC increase significantly from pre to post-test, and is the change different for gender?
- d) Does FWB decrease from pre to post-test, and does it differ by gender?

CHAPTER 2

LITERATURE REVIEW

Overview of the Need for Financial Education

This literature review provides an overview of the need for financial education among college students in the United States. First, the need for financial education in college will be reviewed. Current college attainment levels, as well as national goals for college completion will be discussed. Financial challenges impacting college retention, as well as the long-term impact of those financial decisions for students and universities will also be explored. The second major section of the literature review will explore factors associated with lower financial literacy levels, such as student financial experiences, gender, at-risk and minority populations, and modeling of financial behaviors. Finally, current efforts to effectively teach and assess financial education will be reviewed.

College Attainment Rates

Finances have long been identified as a predictor of post-secondary degree attainment. Studies dating back to 1957 demonstrate that more than a third of students enrolled in college will not go on to complete a bachelor's degree (Iffert, 1957). In these early studies of student retention, research demonstrated that college dropouts tended to have lower academic aptitudes and poorer academic records in high school (Bragg, 1956; Iffert, 1957; Yoshino, 1958), as well as come from lower socioeconomic backgrounds than their peers (Cliff, 1962; Iffert, 1967). Poorer college completion rates for students from lower income-levels still persist today. In 2011, research by Martha Bailey and Susan Dynarski demonstrated that while half of individuals from high-income backgrounds will earn a bachelor's degree by age 25, just one in ten individuals from low-income families will. Students from low-income families that do go on to earn a degree are nearly four times more likely to advance to the top income distribution level than their counterparts, and are 50% more likely to move out of the lowest

income level, however (Isaacs, Sawhill, & Haskins, 2008). Although many programs have been put into place to address academic challenges students face at universities, almost 60 years later, little has been done to eradicate the financial impacts on college success in the United States.

Government Support

While other developed countries have made progress in increasing educational attainment rates, the U.S. has remained relatively stagnant. Korea, who is now the world leader in postsecondary educational attainment, has significantly increased the percentage of citizens completing some form of higher education (Schleicher, 2014). In one generation, Korea has increased the percentage of college-going adults from 13% of 55-64 year olds, to 65% of young adults aged 25-34 (Organisation for Economic and Co-operative Development, 2012). As a country, they have also made a commitment to supporting educators, who earn up to 30% more than the average worker with similar credentials (Schleicher, 2014). In comparison, in the United States, educators earn just 68% of the salary of a similarly educated counterpart (Schleicher, 2014). Still, the direct costs of higher education for students in the United States is higher than all other developed countries (Schleicher, 2012). Among other countries, just 30% of the expenditure on higher education comes from private sources, while in the U.S., 62% of funding does (Schleicher, 2012).

State support for higher education has declined sharply since the 1970's (Wenzl, 2013), and the impact of this may be seen in the ways students are paying for college. Since the 1970's, state support has shifted from constituting 75% of the costs of college, to less than 25% today (Wenzl, 2013). While the United States continues to invest less public resources into education, the net public return in the U.S. is \$232,779 for each man, and \$84,313 for each woman achieving postsecondary education (Schleicher, 2012). Additional taxes collected from increased earnings of college graduates, as well as

the reduced reliance on government assistance programs may lead to economic gains for the country (Schleicher, 2012).

In 2009, 40% of Americans had completed a college degree, and to help address the growing need for college-educated citizens, President Obama set a goal to increase college completion rates to 60% by 2020 (Lee, 2010). This increase would add an additional 8 million college graduates to the workforce (de Nies, 2010), working to resolve the projected “skills gap crisis” (Carnevale et al., 2010). Since setting the 2020 college graduation goal, the federal government has taken steps to address student loan debt and repayment issues by creating and developing new policies meant to provide graduates relief, and encourage current students in attaining their goal of college completion.

Establishing the Consumer Financial Protection Bureau (Whitsett & Mishory, 2012), as well as initiating programs such as income-based repayment plans, student loan forgiveness programs, and requiring universities to increase the transparency of college costs, the government has demonstrated their vested interest in this issue (Office of the Press Secretary, 2015; Reed & Cochrane, 2012). The President’s Advisory Council on Financial Capability and the U.S. Department of Education and the Treasury have indicated a strong interest in empowering students to make sound financial decisions (Presidents Advisory Council on Financial Capability, 2012). In doing so, it is important to understand the financial challenges that students face in achieving post-secondary education.

Rising College Costs

While tuition has continued to rise at twice the core rate of inflation, students and families have struggled adjusting their educational expectations (Cohn, 2011). Most of the additional costs associated with college have been passed on to students (Envisioning the Future of Student Affairs, 2010). In a 2013 article by Randy Hodson and Rachel Dwyer, the authors state, “Decades of slow income growth and rising costs for most families have squeezed available resources so that youth rely less on family

support and must often take on debt to achieve goals like a college degree” (Hodson & Dwyer, 2014, p.1). Indeed, while disposable income grew by just 73% from 1999 to 2011, student loans during this same time rose 511% (Indiviglio, 2011). In 1980, a student who worked a full-time, minimum wage job over the summer could earn enough to pay for a full year of tuition and have the 2012 equivalent of \$1,923 leftover (Mishory & O’Sullivan, 2012). In 2012, a student working the same job over the summer would be able to cover just 42% of tuition at an average four-year college, leaving them with an additional \$4,764 to pay in college costs (Mishory & O’Sullivan, 2012). It is understandable then, that two-thirds of college graduates in 2010 held student loan debt (The Project on Student Debt, 2011), and were taking on debt earlier in their lives than the previous generation (Hodson & Dwyer, 2014).

While in college, 79% of first-year students report frequently worrying about debt (Money Matters on Campus, 2013). Of students who drop out of college, 58% report that they did not receive any financial help from their parents/relatives to pay tuition or fees, and 69% had no scholarships or financial aid (Johnson et al., n.d.). Students’ financial concerns begin even before college, with two out of three high school students reporting that paying for college will be a financial hardship for their family, and 92% of students having applied, or planning to apply for financial aid (StudentPoll, 2011). Today the transition to adulthood often means the transition to taking on debt (Hodson & Dwyer, 2014). Making positive financial decisions regarding college has become more important than ever, yet many students do not yet have knowledge in this area.

Student Loan Debt

Approximately two-thirds of college graduates in 2011 held student loans, at an average of \$26,600 (Reed & Cochrane, 2012). In efforts to meet the rising cost of college, 36% of student loan borrowers in 2011 had taken out private student loans (US Department of Education, 2011). Of the 36% of students borrowing from a bank or private lending institution, 27% also held federal student

loans (US Department of Education, 2011). It is generally agreed that private student loans are a risky way to pay for college and should be used with caution (Reed & Cochrane, 2012). Private student loans often have high interest rates while lacking basic consumer protections (Reed & Cochrane, 2012). Although it is recommended that private student loans be used only as a last resort, research shows that the majority of undergraduates taking out these loans have not used the maximum amount available to them in federal student loans (Reed & Cochrane, 2012). A lack of education regarding loan sources and costs is apparent in students' borrowing decisions.

In an online survey administered to individuals who had participated in a petition regarding student loan forgiveness, 65% reported misunderstanding or being surprised by some aspect of their student loans (Whitsett & Mishory, 2012). Areas that were most frequently cited by students as misunderstood included repayment terms, monthly payments, and interest rates (Whitsett & Mishory, 2012).

While student loans may be a necessary piece of a student's college financial plan, they can also cause mental and financial strains (Dwyer, McCloud, & Hodson, 2011). Having a low degree of financial literacy, when combined with opportunities to incur large amounts of debt, can be a dangerous combination for college students (Palmer, Pinto, & Parente, 2001).

Student Loan Default

Of individuals carrying student loan debt, an estimated 9% will default within two years, and 13.4% will default within three (Money Matters on Campus, 2013). The federal student loan default rate has risen to the highest level in 14 years, with more than five million student loan borrowers having at least one loan past due (Reed & Cochrane, 2011). These figures underscore the need for improved loan counseling prior to, and during the loan repayment period.

While a quarter of college graduates qualify for student loan forgiveness, and a majority of Americans qualify for loan repayment programs, these programs have gone grossly underutilized (Kemenetz, 2014; Reed & Cochrane, 2012). Out of 37 million Americans holding student loan debt, just 1.6 million have enrolled in either of these programs (Kemenetz, 2014). Reasons Americans cite for not enrolling in loan repayment or forgiveness programs are due to difficulties signing up, or because they were simply unaware that they qualified (Kemenetz, 2014). Increased financial education in this area is important in helping graduates remain in good standing, and avoid default in loan repayment (Reed & Cochrane, 2012).

Problems with student loan repayment can lead to future challenges in gaining credit for homes, cars, or other major purchases (Palmer et al., 2001). It can also impact a student's ability to gain internships or employment, since many employers now include financial history in background screening (Palmer et al., 2001). Financial decisions that students are entrusted with making when they enter college may impact them positively or negatively for years to come. Education regarding the impact of these decisions is critical to their future.

Student Financial Literacy

Organizations involved with advocacy and higher education access have begun to focus on issues related to student debt in recent years (Lieber, 2010; Pilon, 2010). As a result, research regarding student financial literacy has emerged. In adopting personal finance education programs, it is important to understand the factors that may put students at-risk in their financial decision making abilities, as well as concepts to be included in curriculum.

Financial Competency

Research demonstrates that students are lacking education in areas relating to debt, credit cards, saving, investing and contracts/leases (Coleman, n.d.; Warwick & Mansfield, 2000). Research also

finds that college freshmen lack personal and general loan knowledge (Simpson, Smith, Taylor, & Chadd, 2012). Between 51 and 71% of college students report that they do not know what interest rate they have on their credit cards (Coleman, n.d.; Warwick & Mansfield, 2000), and 23.7% of first-year students with credit cards report holding over \$1,000 in credit card debt (Money Matters On Campus, 2013). Thirty-five percent of students with credit cards reported making only the minimum payment, and 7.5% were late on their credit card payment in the past year (Money Matters on Campus, 2013).

Ninety-two percent of college students state that saving more money in college is a priority (Huffington Post, 2012). Students who viewed debt as a necessity had an increased likelihood to engage in high-risk debt behaviors, withdraw from college, and make late credit card payments (Money Matters on Campus, 2013). This view also negatively impacted their ability to pay student loans on time and in full, save, follow a budget, and maintain a checking account (Money Matters on Campus, 2013). Young adults holding credit card debt also indicate an increased likelihood to experience anxiety and depression (Hodson & Dwyer, 2014).

In addition to having a poor understanding of credit cards, debt, and saving, students are also less likely to safeguard their personal financial information. College students are five times more likely to be the victim of identity theft (Weisman, 2013), with stolen wallets and pocketbooks being the leading cause of such theft (Reynolds, 2013). Poor management of one's personal financial information may allow thieves to obtain information from credit cards or other forms of identification to open new accounts in the victim's name (Reynolds, 2013).

Without taking preventative steps to avoid identity theft, students may put themselves at a higher risk for negative financial impacts. For example, just 40% of students report knowing that their credit histories could be used by employers in hiring decisions (Coleman, n.d.). With overall low levels

of financial knowledge, it is important then, to understand what factors positively impact education regarding one's finances.

Experience with Finance

In developing financial literacy, one's experience does seem to have an impact on financial confidence and competence. Research demonstrates that students who have taken an economics course in high school out-perform students who have not (Markow & Bagnaschi, 2005). As students begin studies in college, business majors are significantly more likely to be "highly confident" in making decisions that deal with money than are their non-business major counterparts (Coleman, n.d.). Business majors are also more likely to say that they knew "more than most" compared to their peers (Coleman, n.d.). In addition to self-report measures, a study by Susan Coleman indicated that business majors are more knowledgeable than non-business majors in measures of financial literacy (Coleman, n.d.).

Although major may have an impact on one's financial competency, simply being a college or graduate student also has a significant positive impact on financial behavior (Mandell & Schmid Klein, 2009). Upperclassmen demonstrate higher levels of financial knowledge than underclassmen, for example (Danes & Hira, 1987). In a longitudinal study on college students at the University of Arizona, students were found to have more objective knowledge in wave two of the study than in the previous wave one taken as first year students (Shim & Serido, 2011). Three years after the initial assessment, students had demonstrated a five percent overall gain in financial literacy scores (Shim & Serido, 2011).

College students do appear to gain financial knowledge as they progress through their education, but will still continue to gain knowledge through adulthood. Although 41% of Americans would give themselves a grade of "C" or lower in terms of their financial knowledge (Harris Poll, n.d.), research

demonstrates that adults outperform teenagers on measures of financial literacy (Markow & Bagnaschi, 2005). With age comes life experiences that many college students may not yet have. For example, parents feel more financial stress than non-parents, as they have additional expenses to consider (Davidson, Robertson, Anderson, & Ward, 2011). As students gain more life experiences and have more opportunities to work with their finances, their financial knowledge may improve over time.

Gender Differences

Although financial knowledge may develop and improve over time, females have historically demonstrated lower levels of financial knowledge than males (Chen & Volpe, 1998; Danes & Hira, 1987; Goldsmith & Goldsmith, 2006). When questions relating to retirement, stocks, or investments are not used to determine financial literacy scores, however, women are at least as knowledgeable as men in most areas (Coleman, n.d.). Men, however, rank themselves as having more personal finance knowledge than females (Chen & Volpe, 1998; Coleman, n.d.). While men do indeed score higher on most measures of financial literacy, their financial outcomes may not reflect this increased knowledge.

In the article, “Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment”, researchers Brad Barber and Terrance Odean explore the relationship between stock market and its relation to gender (Barber & Odean, 2001). Expanding upon research findings that males demonstrate more overconfidence in their financial abilities than women do (Barber & Odean, 2001), the authors explore how male confidence levels may impact their earnings. Results indicate that men trade stocks at a rate 45% higher than that of females (Barber & Odean, 2001), and in doing so, reduce their returns on investment (Barber & Odean, 2001). It is therefore important to note that confidence in one’s financial knowledge does not always equate to financial success. Indeed, in Barber and Odean’s research, male overconfidence led to poorer financial outcomes (Barber & Odean, 2001).

Other financial outcomes, however, may still be higher for men than for women. For example, women have lower employment rates and lower average earnings than men (DeNavas-Walt, Proctor, & Smith, 2012). Earning just 77 cents to every dollar, women will earn significantly less over their lifetime than men (Whitehouse.gov). A typical 25-year-old woman will earn \$5,000 less annually than her male counterparts (Whitehouse.gov), and in ten years, those wage differences will total \$34,000 (Whitehouse.gov). By age 65, this number will have risen to a total of \$431,000 in lost wages (Whitehouse.gov). Women also report experiencing almost twice as much “high or overwhelming financial stress” as men (Davidson et al., 2011). This may not be surprising, however, considering their overall poorer financial outcomes.

At-Risk and Minority Students

In the wake of the financial crisis, young adults from all socioeconomic backgrounds reported having higher levels of financial strain (Hodson & Dwyer, 2014). However, African Americans experienced higher levels of financial strain than young adults from all other ethnicities (Hodson & Dwyer, 2014). Although there is an increased demand for college access, a significant gap still exists in enrollment, achievement, and completion among underserved populations (Envisioning the Future of Student Affairs, 2010). Out of all of the barriers to first generation or minority students in college, cost seems to have the greatest impact (Envisioning the Future of Student Affairs, 2010). Students from low socioeconomic backgrounds are more likely to report needing to apply for financial aid to meet the costs of college (StudentPoll, 2011). Of high school students from lower socioeconomic backgrounds, 68% plan to work part-time or more during college, compared to 47% of students from more affluent families (StudentPoll, 2011).

In a 2013 “Money Matters on Campus” Report, at-risk students had significantly lower affiliations with a banking institution and were more likely to demonstrate risky behaviors and attitudes in regards to spending, saving, and debt.

Financial Modeling

Young adults that depend on their parents for financial advice are less likely to experience financial strain, while youth who receive financial advice from individuals other than their parents experience higher levels of financial strain (Hodson & Dwyer, 2014). Of those receiving financial advice from someone other than a family member, those seeking advice from professionals were least likely to report financial strain (Hodson & Dwyer, 2014). Individuals seeking advice from someone other than a family member or professional were most likely to experience financial strain (Hodson & Dwyer, 2014). These results indicate that for students who do not have parents serving as positive models in managing finances fare best when receiving advice from a professional, as compared to other outside sources.

University Support

Institutions for post-secondary education are an important source of financial information for many students. The types of financial services available to students in college vary a great deal, with some institutions providing information through the financial aid office, and other universities providing additional information and programming in their student services departments (Hodson & Dwyer, 2014).

University representatives report that a majority of their efforts are directed at entering students, with less attention given to current or graduating students’ financial needs (Hodson & Dwyer, 2014). Most of the individuals interviewed reported that their financial literacy efforts occurred due to the programs the financial aid director prioritized (Hodson & Dwyer, 2014). More than 60% of schools

currently offering money management programs report that they believe their programs are not comprehensive and are in need of more support (Trombitas, 2012). One-hundred percent of university personnel participating in a 2014 study by Hodson & Dwyer reported that, given more resources, they would do more for financial literacy.

Students who drop out after their freshman year of college often cite financial issues as their reason for leaving, and this exodus costs institutions an estimated \$3.9 million annually (Trombitas, 2012). The cost to students, the university, and their communities is staggering, and is cause for increased programming aimed at addressing student financial literacy. A 2013 Money Matters on Campus Report states that, “Addressing student financial problems should be the responsibility of the entire institution—students, faculty, student affairs, and financial aid” (Money Matters on Campus, 2013, p. 6).

Measuring Financial Literacy

College students are faced with a variety of financial challenges today, but if they are provided education on financially planning for college, the benefits still far outweigh the alternative. Understanding best-practices for teaching and assessing financial literacy outcomes is beneficial in the establishment of financial education programs.

Teaching Financial Education

It is important to consider teaching and measuring financial literacy topics that are relevant to students in accordance with their development. Developing techniques that allow for differentiated instruction, depending on a student’s current and future needs and interests is necessary in improving retention of financial education materials (Money Matters on Campus, 2013). Financial education cannot, and should not, be limited to one educational course or lesson, but rather should be viewed as a skill that one develops throughout the course of their life (Money Matters on Campus, 2013). By

implementing financial education at critical points in development, students may experience a greater understanding and higher application of the material covered (Money Matters on Campus, 2013). By targeting specific points in a college student's development, and teaching to the financial concerns of students at that time, greater outcomes may be achieved through instruction.

Financial Literacy Assessments

Both performance tests and self-report measures have been used to evaluate financial literacy (Hung et al., 2009, p 8). Many self-reports assess perceived knowledge or confidence, and may not measure actual knowledge held. Consumers often believe they know more than they actually do (Alba & Hutchinson, 2000; Lichtenstein, Fischhoff, & Phillips, 1982; OECD, 2005; Yates, 1990).

Although individuals' perceived financial knowledge may not correlate with their actual knowledge, it may impact their financial behavior (Lusardi & Mitchell, 2007). Individuals make decisions about what actions they will take in regard to their finances, and these steps may depend on their perceived level of financial literacy (Lusardi & Mitchell, 2007). Having financial knowledge promotes behaviors such as retirement planning and savings, as well as performance related to investment (Parker, Yoong, Bruine de Bruin, & Willis, 2008). However, confidence in one's financial knowledge, regardless of actual knowledge, may also positively impact retirement planning, saving, and investment behaviors (Parker et al., 2008). It is important to note that overconfidence in one's abilities has also demonstrated poor outcomes for investing decisions among men, however (Barber & Odean, 2001).

Although research findings do demonstrate a relationship between financial education and positive financial behaviors (Hilgert, Hogart, & Beverly, 2003), the relationship is weak, and exhibits poorer outcomes than similar interventions in fields such as workplace education or career counseling (Fernandez, Lynch, & Netemeyer, 2013). Given budgetary limitations, however, many universities do

not have funding for comprehensive programs such as one-on-one financial coaching or ongoing money management programming (Trombitas, 2012) and must rely on financial education employed in academic programs.

Results of Financial Literacy Instruction

Students have stated that financial education is helpful when it comes to understanding their finances, and schools are therefore beginning to implement money management programs on their campuses (Trombitas, 2012, p.2). Research suggests that providing various delivery methods for financial education on campus is best in reaching a wide range of students (Goetz, Cude, Nielsen, Chatterjee, & Mimura, 2011).

Students who participate in academically supported financial education programs have demonstrated increased knowledge (Fox, Bartholomae, & Lee, 2005), are less likely to be at-risk financially (Lyons, 2003), and behave more responsibly with their finances when compared to students who have not been exposed to this type of financial education (Fox et al., 2005; Huddleston & Danes, 1999; Tennyson & Nguyen, 2001). The knowledge gap between men and women in financial literacy has also been effectively closed after formal instruction in personal finance and investing (Goldsmith & Goldsmith, 2006).

Higher education institutions that have implemented a mandatory financial literacy program have seen increased college completion rates and an increase in financial knowledge, attitudes, and behaviors (Money Matters on Campus, 2013). Research also indicates that debt management education received in college positively impacts future alumni giving (Jendrek & Lynch, 2007). In addition to potentially having more funds to donate due to successful money management skills gained, alumni tend to have more of a positive regard for universities that provided this type of education to them as students (Jendrek & Lynch, 2007). Alumni who were satisfied with the helpfulness of their university

in providing debt management information, as well as in explaining loans and repayment options experienced higher levels of alumni giving (Jendrek & Lynch, 2007).

A majority of alumni believe that college students should receive more information about loan repayments, and that loan borrowers should receive financial counseling (Jendrek & Lynch, 2007). Alumni also report that when they borrowed money for college, they did not have a thorough understanding about the amount of debt they were incurring (Jendrek & Lynch, 2007). Although alumni believe education is important regarding student loan debt, less than half of them feel that their financial aid office provided them with helpful information in all service areas (Jendrek & Lynch, 2007).

Incoming, current, and former students' concerns regarding money management in college are evidence of the need for financial education at universities. The evaluation of resources aimed at improving financial literacy among college students is important in determining if students' educational needs are being met.

CHAPTER 3

METHODS

Purpose of Study

In efforts to help address the growing need for financial education in college, the Kansas Board of Regents provided grant funding to develop an online tool for students, parents, and educators aimed at increasing financial literacy among college-bound students. This study gathered critical data to examine the efficacy of the implementation of the online course, MyCollegeMoneyPlan.org, into a first-year seminar course at a university.

This study's aim is to interpret students' gains in knowledge of financial topics relating to their early careers as college students. Topics measured include understanding the costs of college, student loans, using the Free Application for Federal Student Aid (FAFSA) as a resource, basic budgeting, credit card debt, steps to building credit, avoiding identity theft, understanding services within and outside of the mainstream economy, and the importance of having a checking/savings account.

This study investigates the following research questions relating to financial competency and well-being:

- a) Does FC correlate with FWB before instruction?
- b) Does FC correlate with FWB after instruction?
- c) Does FC increase significantly from pre to post-test, and is the change different for gender?
- d) Does FWB decrease from pre to post-test, and does it differ by gender?

Participants

One hundred and eighty-one students in an introductory course at a Midwestern urban-serving university participated in a financial literacy study in an introductory first-year seminar class. Students ranged in age from 18 to 59, with an average age of 19 and a half and a standard deviation of 4.89.

Students were representative of all majors, with the highest percentage of students identifying as “Liberal Arts and Sciences” (28%) and “Health Sciences” (23%). Of students electing to participate in the study, 67% were females and 33% were males. Sixty-five percent of participants identified as White (non-Hispanic), 7.7% as Mexican, Mexican American, or Chicano, 4.7% as Black or African American, 4% as Asian or Asian American, 1.8% as other Hispanic, Latino, or Latin American, .6% as American Indian or Alaska Native, and .6% as Puerto Rican. An additional 15% of students reported being of multiple ethnicities, and .6% preferred not to identify their ethnicity. Participants came from a wide variety of educational backgrounds, with parents ranging from having less than a high school diploma to holding a doctorate or professional degree.

Assessments

Financial Competency Questionnaire

Participants in this study completed a 13 item pre and post-test, tracking gains in financial literacy resulting from participating in the online financial education course and in-class activities. Pre and post-test questions may be found in Appendix A. Test questions were selected from the Teaching Resources section available in the online course, MyCollegeMoneyPlan.org (Hagan, Holthaus, Vanderburgh, & Vandecreek, 2011). Course developers, as well as outside professionals analyzed the test questions for content validity in regard to the material covered in the online course. Financial competency was measured using items that were specific to this course curriculum and did not include other items frequently used to measure financial competency, such as retirement or investing. Only information necessary for planning to meet the costs of college and becoming financially independent while in college were part of this curriculum. Therefore, test questions unique to this course content were selected to test gains in financial knowledge. An example of a selected test item specific to this course content is, “Completing a FAFSA every year could make you eligible for the following: federal

student loans, federal education grants, federal work study, and some scholarships.” Test questions reviewed a variety of topics, such as planning for the costs of college, completing the FAFSA, student loans, budgeting, and loan repayment and forgiveness, which corresponded with in-class activities, as well as online material associated with this course curriculum.

Financial Well-Being Questionnaire

Participants’ financial well-being was measured using an eight-item Financial Well-Being Scale (Prawitz et al., 2006). This survey is intended to measure individuals’ financial well-being in comparison to national averages. The instrument utilizes a likert scale ranging from one to ten. Although anchors vary with each question, an example of anchors used includes, “How satisfied are you with your present financial situation?” with answer choices ranging from “feel overwhelmed” to “complete satisfaction” (Prawitz et al., 2006). A copy of the scale may be found in Appendix B.

The national average score on the instrument is 5.7, with 30% of individuals scoring between one and four, 42% scoring between seven and ten, and 28% between five and six. Test developers have tested for content, face, concurrent, convergent, predictive, and discriminant validity, as well as reliability (Prawitz et al., 2006).

Survey developers implemented a three-phase Delphi process, seeking 52 experts with extensive knowledge in personal finance who evaluated 58 concepts, attributes and objects related to financial well-being (Prawitz et al., 2006). Once items were selected through the Delphi process, they were nationally tested and normed for the general population, as well as financially distressed populations (Prawitz et al., 2006). Each item and anchor was tested and required to meet 11 out of 12 criteria relating to face, content, construct, and criterion validity to be included in the scale (Prawitz et al., 2006).

In the norming process, it was determined that mean scores of 1.0 - 4.0 indicated high financial distress/low financial well-being, scores of 4.1 - 6.9 were of average financial distress/average financial well-being, and mean scores of 7.0 - 10.0 represented those with low financial distress/high financial well-being (Prawitz et al., 2006). Mean scores were also established based on gender. While the overall mean score for the general population is 5.7, men reported higher mean scores, at 6.2, and women with lower scores at 5.4. These findings are consistent with other measures of financial well-being, with women reporting higher levels of financial stress and lower levels of financial well-being than men (Hira & Mugenda, 2000).

Improvements in financial well-being scores may occur due to behavioral changes that decrease financial stress (Prawitz et al., 2006). Interventions designed to improve financial knowledge and money management behaviors may therefore be evaluated, in part, by measuring changes in financial distress and well-being scores (Prawitz et al., 2006). The Financial Distress and Well-being scale has been determined to be a suitable instrument for repeated use (Prawitz et al., 2006), so was selected for use in a pre and post assessment in this study of financial literacy.

Demographic Information

Participants were also asked to complete a demographic survey consisting of twenty-four questions regarding family education and income levels, personal financial and educational goals, gender, major, and ethnicity, as well as prior course use. These questions were selected for purposes of determining future generalizability from this study. Demographic questions may be referenced in Appendix C.

Procedures

Study Proposal

Researchers followed a formal proposal process, submitting this study to the Institutional Review Board at Wichita State University. A copy of the approved IRB document may be found in Appendix D.

Survey Participation

Researchers visited ten Introduction to the University classes, inviting students to participate in a survey regarding financial well-being. Participants were informed of the evaluation's purpose, the use of extra credit as an incentive, and had any additional questions answered in class. Students were informed that they had an additional option to write a paper for extra credit if they did not wish to participate in the online surveys.

Participants completed an online pre-test measuring financial competency for course participation points at the beginning of the semester. Upon completion of the pre-test, students were provided with the link to the online financial well-being survey for extra credit. All participants were required to read and sign an electronic copy of a consent document prior to participating in this study. Participants were directed out of the survey if they did not agree to the consent statement or were not 18 years old at the time of the study. Participants completed the pre and post-tests for class, as well as the optional survey online using an identification number assigned to them by their course instructor. The researchers did not have access to student names associated with identification numbers except in the case that a student indicated an intent to harm oneself or others. Participants were informed about the policy regarding de-identification in the consent document received prior to participating in the study, which may be found in Appendix C.

Participants completed a pre-test of financial competency assigned by their instructors, as well as had the option to complete a survey regarding demographic information and financial well-being for

extra credit. Students were allowed to complete the online survey in any location they chose within a one-week period. Both the pre-test and survey were completed at the beginning of the semester before any financial material was covered in class.

Course Instruction

Course instructors assigned the completion of Part I and II of MyCollegeMoneyPlan.org to students in week seven of the course. Instructors lead three one-hour in-class lessons corresponding with the online materials, using the teaching resources outlined in MyCollegeMoneyPlan.org. Lesson plans may be found in Appendices E-G. Within one week of completing the online course, students were asked to complete a post-test measuring financial competency and had the opportunity to complete a survey measuring financial well-being for extra credit. Post-tests were administered online and were completed within a one week period.

Conclusion of the Evaluation

A debriefing occurred following the completion of the follow-up financial well-being survey to ensure that no undue stress had occurred as a result of participation in the evaluation. Information was provided to participants on resources such as the Financial Aid office on campus, the Counseling and Testing Center on campus, and the Consumer Credit Counseling Service, Inc. in Kansas. Survey responses indicating acceptance of the informed consent document were stored electronically.

Data Analysis

- a) A correlation was used to determine if there is a relationship between FC and FWB before instruction.
- b) A correlation was used to determine if there is a relationship between FC and FWB after instruction.
- c) A within subjects ANOVA was used to measure any increase in FC from pre to post-tests, and a between subjects ANOVA was used to test for any differences due to gender.

- d) A within subjects ANOVA was used to measure any increase in FWB from pre to post-tests and a between subjects ANOVA was used to determine differences by gender.
- e) Additional exploratory ancillary analyses were conducted.

CHAPTER 4

RESULTS

Descriptive Statistics

Descriptive analyses were conducted on the major variables of this study. These are reported in Table 1 shown in Appendix H. These data indicate responses varied substantially and none of the measures were skewed.

Major Analyses

Four major questions were addressed in these analyses. The first two questions were, “Does Financial Competency (FC) correlate with Financial Well-Being (FWB) before instruction. And, does FC correlate with FWB after instruction?” The third research question was, “Does FC increase significantly from pre to post-test, and does it differ by gender?” And the fourth question was, “Does FWB increase from before instruction to after instruction, and does it differ by gender?”

The first two questions were addressed with zero order correlations. These analyses indicated that there was no significant correlation between the pre FC and pre FWB, and there was no significant correlation between post FC and post FWB. These correlations are shown in Table 2 in Appendix I.

Question three was addressed with a two-way ANOVA (the within subject variables were FC pre-test scores and post-test scores and between subject was gender.) The multivariate statistic, Wilks-Lambda, was significant for FC: ($F(1,115) = 35.74, p < .001, \eta^2 = .25$). The interaction of FC with gender was not significant. As can be seen in Table 1, FC is higher in the post-test condition. This analysis indicates that it was significantly higher.

Question four was again addressed with a two-way ANOVA (the within subject variables were FWB pre-test scores and post-test scores and between subject was gender). The multivariate statistic was not significant for FWB or the interaction between FWB and gender.

In order to determine if there were gender differences among the major variables of this study, analyses of variances (ANOVA) were conducted. When FC pre-test was the dependent variable, there was a significant difference between genders ($F(1, 116) = 4.60, p < .05, \eta^2 = .04$). Women had higher FC than men in the pre-test. When FC post-test was the dependent variable, there was no significant difference between genders.

However, when FWB pre-test was the dependent variable, there was a significant difference between gender ($F(1, 115) = 5.07, p < .05, \eta^2 = .04$). When FWB post-test was the dependent variable, there was also a significant difference between gender: ($F(1, 105) = 6.69, p < .05, \eta^2 = .06$), as seen in Table 1. The means indicate that in both pre and post-test conditions men were experiencing more financial well-being than women.

Exploratory Ancillary Analyses

Eight ancillary analyses were conducted to explore the data further. Stepwise Regressions were run with each major variable: FC pre and post-tests and FWB pre and post-tests, as the dependent variables in four of the regressions. Basic demographic information: age, gender, and the highest level of parental education served as the predictor variables. Stepwise regression involves predictor variables competing for entry. Only those variables significant at the .05 level are allowed to enter. The one accounting for the most variance enters first and the next most variance enters next, and so forth.

When FC pre-test served as the criterion variable, gender was significant ($F(3,112) = 3.10, p < .05, R^2 = .075, b = .82$). The b-weight of .82, indicates women had higher levels of FC. This is consistent with the ANOVAs previously run. When the FC post-test was the dependent variable, there were no significant differences between men and women.

In pre FC, women were higher ($F(1, 116) = 4.60, p < .05, \eta^2 = .04$). When pretest FWB was the criterion variable, two predictors were significant. Age entered first ($F(1, 140) = 7.06, p < .01, R^2 = .05$,

$b = -.09$). Gender entered next ($F(1, 139) = 5.60, p < .02, R^2 = .04, b = -.88$). Findings demonstrate that older individuals and women had lower levels of FWB.

When post-test FWB was the criterion variable, two predictors were significant. Age entered first ($F, (1, 123) = 14.52, p < .001, R^2 = .11, b = -.12$). Gender entered second ($F(1, 122) = 13.72, p < .001, R^2 = .09, b = -1.30$). Post-test scores again indicated that older individuals and women held lower levels of FWB.

The remaining four analyses that were conducted were one-sample t-tests to determine if participants' financial well-being scores were consistent with national averages in both the pre and post-tests by gender. Scores for males and females were comparable to the national averages, and no significant differences were found in either the pre or post-tests.

CHAPTER 5

DISCUSSION

Context of the Study

This study was conducted to examine the efficacy of a free online financial education program, MyCollegeMoneyPlan.org, in increasing financial literacy among college students. Students in a first-year seminar class completed the online course, and participated in corresponding in-class financial education activities. Pre and post-tests were utilized to measure financial competency and financial well-being. Descriptive statistics were also analyzed using demographic information gathered. Financial competency and well-being results were reported using Stepwise Regressions, Analyses of Variance, and one-sample t-tests. Results indicated that financial competency scores increased significantly from pre to post-tests. Reported levels of financial well-being did not differ significantly from pre to post-tests, and were consistent with nationally representative samples (Prawitz et al., 2006). Financial well-being did differ among variables of gender and age, however.

Reflections on the Results

This study was an investigation of the efficacy of financial literacy instruction. One of the most important questions in this study addressed if student financial literacy improved after instruction. The analysis of financial competency scores supported this sign of efficacy. The post-test financial competency scores were significantly higher than the pre-test scores. This suggests that in a small amount of time, students' understanding of finances can be improved.

When deeper analyses were run to determine if there were gender differences, women demonstrated higher financial competency scores than men in the pre-test condition. In the post-test condition, there was no significant difference between men and women. These results indicate that the

course was able to help men reach a comparable level to women with regard to financial competency, and the instruction was effective for both genders.

Women scored higher on the initial measure of financial competency, which is consistent with research utilizing similar instruments (Coleman, n.d.). This study did not rely on knowledge in mathematics or on topics such as investing or retirement in determining a financial competency score.

Another important question addressed in this study was, will the course be efficacious for enhancing student financial well-being? Results did not demonstrate a significant difference in pre and post-test scores of financial well-being overall. Analyses did indicate that students' financial well-being scores in this study were comparable to the national averages, indicating the sample was similar to the nationally representative sample (Prawitz et al., 2006).

These findings beg the question, is there a relationship between financial competency and financial well-being? The zero order correlations indicate no significant relationship between these two variables either at the pre-test or post-test condition. This suggests that financial competency is not a guarantee of financial well-being. This research contributes to similar findings by Fernandez, Lynch, & Netemeyer, indicating a weak relationship between financial education and positive financial behavior (2013).

An interesting gender difference to note is that in both pre and post-test conditions, men had a higher sense of financial well-being than women. This is consistent with nationally representative samples, in which men demonstrate higher levels of financial well-being (Prawitz et al., 2006). It is important to note that even among this sample of college students, financial well-being scores were already significantly higher for men than women. There are several possible interpretations of this result. One is that, indeed, men have a sense of control over their own finances, or they have optimism that a career will bring them money. Both of these interpretations are supported by the current

literature. Men score higher than women in terms of financial literacy when concepts such as retirement and investments are included in measurements (Coleman, n.d.), and they also report higher confidence levels in managing investments (Barber & Odean, 2001). Men will also earn more money than females over the course of their lifetime (Whitehouse.gov), and therefore may feel less stress regarding their current and future financial situation.

Yet there is a different interpretation that is less optimistic. Men may be overconfident in their abilities to manage their finances. Emerging research indicates that men are over-confident in their abilities to manage investments, reducing their returns by trading more frequently than females (Barber & Odean, 2001). Although men reported having higher financial well-being than women in this study, women outperformed men on initial measures of financial competency. Lower levels of financial competency combined with higher reports of financial well-being may be indicative of overconfidence among males regarding financial management.

Ancillary analyses of regressions added two more insights into these data. Younger individuals have a higher sense of financial well-being in both the pre and post-test. Again, there are several possible interpretations of these results. Younger individuals may be optimistic about the future, as they are in the beginning stages of their careers. Or, young adults may have less experience in managing their finances, and are not as aware of potential challenges they will face, as their older counterparts may be. Research demonstrates that adults do outperform teenagers on measures of financial literacy (Markow & Bagnaschi, 2005), indicating that individuals may learn more about personal finances with experience. Parents also demonstrate higher levels of financial stress than non-parents (Davidson et al., 2011), further indicating that with additional life experiences may come increased awareness of financial responsibilities (Davidson et al., 2011).

Results from this study have important implications for higher education. This research clearly suggests that in an expeditious manner, we may begin to influence college students' understanding of finances. As college costs continue to rise, and students continue to cite finances as a leading cause for their withdrawal from the university (Johnson et al., n.d.), financial education may be an important area for universities to address in reducing student attrition. While implementing a one-week financial education curriculum increased student financial literacy scores for both men and women, it did not succeed in increasing students' reported levels of financial well-being. It is possible that other forms of financial literacy interventions may have a greater impact on financial well-being among college students. Colleges that implement a variety of financial literacy programs on their campuses demonstrate the most promising outcomes for students (Goetz et al., 2011). Therefore, it is worth considering if alternative educational formats may enhance financial well-being more effectively, or if an enhanced version of the current treatment method may demonstrate more promising results in terms of student financial well-being.

Limitations of the Study

Although research findings regarding gains in financial literacy are promising, it is important to note the limitations of this study. This study was conducted with students enrolled in a first-year seminar course at a Midwest urban-serving university, and may not generalize to all student populations. The online course utilized in this study reviewed financial information important for incoming college students and did not cover topics such as retirement or investing, believed to be important in financial literacy measures for adults. This study was focused on preparing incoming college students with financial information necessary to be successful in college. This study utilized financial competency measures derived from teaching resources associated with the online course, MyCollegeMoneyPlan.org. Questions were content-specific to the financial literacy materials reviewed

in this course, and therefore may not be generalizable for other types of financial literacy programs. Because the survey offered an incentive for student participation, it is important to note possible volunteer bias as well. While the sample included representation from all ethnicities, participants in this study were predominately Caucasian. Females also made up a larger proportion of survey participants, limiting the study's generalizability.

Future Research

Findings from this study are consistent with current research regarding male and female scores on similar measurements of financial literacy (Coleman, n.d.). While females demonstrated higher levels of initial financial competency in this study, it is worth exploring whether these increased scores were related to a scale devoid of questions pertaining to interest, retirement, and numeracy skills. Students from different academic domains may also have differing sensitivities to financial literacy. While this sample was not sizable enough to effectively study differences by major, future work in this area may be done to determine program effectiveness among various populations. Additionally, financial education programming on topics pertaining to graduating college students is an area for future study. Future work may also point to the development of a standardized test for assessing college financial literacy levels at various points within one's education. Identifying areas of financial interest or need for students throughout their college experience may be beneficial in developing effective financial literacy programming on college campuses.

While this study did not demonstrate significant changes in financial well-being, it points to future work to be done in this area. Prolonged exposure to financial education programs, or alternative education programs, such as one-on-one financial counseling, may be more effective in increasing students' perceived levels of financial well-being. It is also possible that follow-up studies may reveal changes to financial well-being well-after financial education occurred. While students may have the

ability to increase financial competency in a short amount of time, increasing one's sense of financial well-being may require behavioral changes that demand more time than allowed for in this study. Of concern in this study, are women's poorer self-reports in terms of financial well-being. Further research regarding the onset of financial distress, as well as factors leading to these lower ratings among gender, are an area for future study.

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APPENDICES

APPENDICES

APPENDIX A

Financial Literacy Pre and Post-Test

Please complete the following pretest for course participation points. You will only be graded on your participation, so please answer the questions to the best of your ability without the use of additional resources.

Please enter your assigned class identification number below to earn credit for completing this test. Note, this is NOT the same number as your myWSU I.D. If you do not know your I.D. number, it may be found in a document emailed to you by your instructor. This number will be used to assign participation points, so it is important that you have the correct number.

Answer the following questions to the best of your abilities. No additional outside resources should be used while selecting your answer choices. You will NOT be graded on these questions.

Q1 The best way to deal with the costs of college is to

- Wait for the school to send you a bill.
- Not worry, the government will take care of most of the costs.
- Put all of your resources into paying for your first year of school, as that is the most important.
- **Understand the specific costs and plan for them.**

Q2 Doing your FAFSA every year could make you eligible for the following

- Federal Student Loans and Pell Grants
- **Federal Student Loans, Federal Education Grants, Federal Work Study, and some scholarships**
- Federal Student Loans and Federal Work Study only
- None of the above

Q3 If you need a loan to help with college costs it should be a Federal Student Loan. What is NOT true regarding federal student loans?

- They are usually less expensive (have lower interest rates and fees) than other types of loans a student can get.
- They are easier to get (the student's credit history is not considered).
- **The interest rates are more variable than other types of loans.**
- They have repayment plans that are usually better than most other loans used to meet the costs of college.

Q4 What is the best definition of a periodic expense or "hidden cost"?

- Costs associated with emergencies you couldn't plan for.
- Something you purchase periodically each month, like groceries.
- **An expense that happens at least once a year but not every month, like car tags.**
- All of the above

Q5 If a secured loan goes into default, the lender would normally take steps to:

- Lower the interest rate.
- Increase your credit score for paying the loan off early.
- **Take ownership of the collateral that secured the loan.**
- Increase the number of loan payments you have each month.

Q6 What is the “grace period” as it applies to credit cards?

- The amount of time needed to find the money to make a minimum payment.
- When you can get a credit card between the ages 18-25 without having any previous credit history.
- If you don't pay your bills, the amount of time before your credit card is shut down.
- **The time you have to pay the entire bill and not be charged interest.**

Q7 What is one of the first things you should do if you start to have difficulty in repaying student loans?

- Borrow money on a cash advance to cover the shortage.
- Don't answer phone calls from bill collectors until you know can pay them.
- **Tell your loan servicer about the problems you are having paying.**
- Request default status on your loans.

Q8 It is easy to have a federal or private student loan cancelled or forgiven.

- True
- **False**

Q9 To reach a financial goal you should:

- Borrow from family or friends to help cover bills.
- **Spend less than you make so you can save money to reach the goal.**
- Get rid of your entertainment budget.
- Use credit cards so you can save the money that's in your bank account.

Q10 Why are Rent-to-Own contracts, Auto Title Loans, and Payday Loans “debts to avoid”?

- Because the loan activity is reported to the credit reporting agencies.
- Because they don't always stick to the contracts they have customers sign.
- Because they only loan to people with good credit.
- **Because they are very expensive.**

Q11 The single most important factor that affects your credit score is:

- Your employment status.
- How long you have had credit.
- **The payment history of the accounts on your credit report.**
- Your income.

Q12 What is true about a Social Security Number?

- You should keep your Social Security Card in your wallet or car for positive identification reasons.
- **You should ask why someone really needs it if it is on a form you are filling out.**
- Give out your number whenever someone asks for it, but keep the original card in a safe location.
- All of the above

Your answers have been recorded. The link below will take you to an optional survey for extra credit. The survey will take approximately 5 minutes to complete.
<https://www.surveymonkey.com/s/FinLit101>

APPENDIX B

Personal Financial Wellness Scale[®]

Online Version

1. What do you feel is the ***level*** of your ***financial stress today?***

1	2	3	4	5	6	7	8	9	10
Overwhelming Stress			High Stress		Low Stress			No Stress at All	

2. How ***satisfied*** are you with your ***present financial situation?***

1	2	3	4	5	6	7	8	9	10
Complete Dissatisfaction		Somewhat Dissatisfied			Somewhat Satisfied			Complete Satisfaction	

3. How do you feel about your ***current financial condition?***

1	2	3	4	5	6	7	8	9	10
Feel Overwhelmed		Sometimes Feel Worried			Not Worried			Feel Comfortable	

4. How often do you ***worry*** about being able to meet ***normal monthly living expenses?***

1	2	3	4	5	6	7	8	9	10
All the time		Sometimes			Rarely			Never	

5. How confident are you that you could find the money to pay for a ***financial emergency*** that costs about ***\$1,000?***

1	2	3	4	5	6	7	8	9	10
No Confidence		Little Confidence			Some Confidence			High Confidence	

6. How often does this happen to you? You want to go out to eat, go to a movie or do something else and ***don't go because you can't afford to?***

1	2	3	4	5	6	7	8	9	10
All the time		Sometimes			Rarely			Never	

7. How frequently do you find yourself just getting by financially and living ***paycheck to paycheck?***

1	2	3	4	5	6	7	8	9	10
All the time		Sometimes			Rarely			Never	

8. How ***stressed*** do you feel about your personal finances ***in general?***

1	2	3	4	5	6	7	8	9	10
Overwhelming Stress		High Stress		Low Stress			No Stress at All		

To find your “Personal Financial Wellness” score divide the total of the ratings on the questions by 8 (the range is 8 to 80). For example, 45/8 = 5.6. National norms for working adults in the United States reveal that the average mean score is 5.7, 30% scored between 1 and 4, 42% scored between 7 and 10, and 28% were at 5 and 6 on the continuum. For permission to use, contact E. Thomas Garman, President, Personal Finance Employee Education Foundation; Professor Emeritus and

Fellow, Virginia Tech University, 9402 SE 174th Loop, Summerfield, FL 34491; Tele/Fax: 352-347-1345; E-mail: info@pfeef.org; Web: www.PersonalFinanceFoundation.org. This is the online version; the original question 2 is configured in a 10-step ladder format, and it is available. ©Copyright: Personal Finance Employee Education Foundation, 2004-2009. All rights reserved.

APPENDIX C

Financial Literacy Online Survey

Consent Statement

EXTRA CREDIT OPPORTUNITY:

You are invited to participate in an evaluation of student financial stress/well-being. Participation in this survey is separate from the online tests required for participation points in WSU 101. This study is led by the Financial Literacy Project at Wichita State and participation is optional. Participants in this survey will earn extra credit for completing two surveys: the survey made available today, as well as one follow up survey in October. We hope to learn about issues facing students and any additional resources that may need to be made available to students. You will have other opportunities to earn extra credit if you do not wish to participate in the online surveys.

You are eligible to participate in this evaluation because you are a student enrolled in a WSU 101 Introduction to the University Course at Wichita State University and are 18 years old or older. Approximately 100 other students will be participating in this evaluation as well.

If you decide to participate, you will be directed to an online survey that will take approximately 10 minutes to complete.

There are no anticipated risks associated with this study. The primary inconvenience will be the time taken to complete the surveys. All of the information disclosed will be kept confidential and only summary data will be reported to protect your privacy. Course instructors will only be notified of participation and not individual answer choices for students choosing to earn extra credit.

Information obtained in this study in which you can be identified will remain confidential and will be disclosed only with your permission. The only exceptions concerning confidentiality include the indication of harm to oneself or others.

Participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your standing with the university. If you agree to participate in this study, you are free to withdraw from the study at any time without penalty.

Participants are advised to print a copy of this consent statement for personal records. If you do not have access to a printer, please contact Gretchen Holthaus to receive a copy of the consent statement. Additionally, any other questions you may have can be directed to Gretchen Holthaus, 1845 Fairmount, Box 97, Wichita, KS 67208, 316-978-3254. If you have questions pertaining to your rights as a research subject contact the Office of Research and Technology Transfer at Wichita State University, Wichita, KS 67260-0007, (316) 978-3285.

You are under no obligation to participate in this study. By clicking "yes" below, you are indicating that you have read the information provided above, are 18 years of age or older, and have voluntarily decided to participate.

*** 1. Please enter your assigned class identification number below if you have read the consent statement and wish to proceed. If you do not know your I.D. number, it may be found in a document emailed to you by your instructor. This number will be used to assign you extra credit, so it is important that you have the correct number.**

Literacy Survey 101 Course

1. What is your gender?

- Male
- Female
- Prefer not to answer

3. Ethnicity:

- American Indian or Alaskan Native
- Asian or Asian American
- Black or African American
- Mexican, Mexican American, or Chicano
- Native Hawaiian or Other Pacific Islander
- Puerto Rican
- Other Hispanic, Latino, or Latin American
- White (non-Hispanic)
- Prefer not to answer

Other (please specify)

4. What is your age in years?

Educational Background

Financial Literacy Survey 101 Course

5. What is the highest level of education either your father or mother completed?

- Did not complete high school or GED equivalent
- Completed high school or GED equivalent
- Some college or technical schooling
- 2-year college degree
- 4-year college degree
- Master's degree
- Doctorate or professional degree
- Don't know

Other (please specify)

6. Do you intend to graduate from college?

- Yes
- No
- Not Sure

Educational Plans

7. Do you intend to graduate from Wichita State University?

- Yes
- No
- Not Sure

8. What is your major in?

- Business
- Education
- Engineering
- Fine Arts
- Health Professions
- Liberal Arts and Sciences
- Undecided

Other (please specify)

Financial Literacy Survey 101 Course

Financial Well-Being

The following questions will ask you to measure your level of financial stress/well-being. Please answer them as honestly as possible, and remember that your name will not be associated with your responses, and will never be shared publicly.

9. What do you feel is the level of your financial stress today?

Overwhelming Stress										No Stress at All
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. How satisfied are you with your present financial situation?

Complete Dissatisfaction										Complete Satisfaction
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. How do you feel about your current financial condition?

Feel Overwhelmed										Feel Comfortable
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Financial Well-Being

12. How often do you worry about being able to meet normal monthly living expenses?

All the Time										Never
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. How confident are you that you could find the money to pay for a financial emergency that costs about \$1,000?

No Confidence										High Confidence
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. How stressed do you feel about your personal finances in general?

Overwhelming Stress										No Stress at All
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Planning/Saving Behaviors

Financial Literacy Survey 101 Course

15. Please answer the following questions with the answer choices provided.

	All the Time		Sometimes		Rarely		Never
How frequently do you find yourself just getting by financially and living paycheck to paycheck?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How frequently do you find yourself just getting by financially and living paycheck to paycheck?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. What is your best estimate of your family's income last year? Consider annual income from all sources before taxes.

17. Please answer the following questions using the answer choices provided.

	Yes		No		Not Sure
Do you use a checking or savings account at a bank or credit union?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do you financially plan for more than a month?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. People handle their own personal finances differently. Some feel good about how they manage their finances, and some would like to improve some of their financial behaviors. (Financial behaviors include things like making a spending plan, using credit cards to charge purchases, paying bills on time, and investing for retirement.) Which of the following best describes your intention to improve your financial behaviors?

- I do not intend to improve my financial behaviors in the next 6 months
- I have not done anything to improve my financial behaviors, but I intend to in the next 6 months.
- I have not done anything to improve my financial behaviors, but I intend to in the next 30 days.
- I have improved my financial behaviors, but have been doing so for less than 6 months.
- I have been making improvements in my financial behaviors for more than 6 months.

Financial Literacy Survey 101 Course

19. Please answer the following questions using the answer choices listed.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I know how to effectively manage my money	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to find the individual costs of a college	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to finance the costs of college	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to use resources to complete the FAFSA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am likely to complete college in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. Have you heard of www.mycollegemoneyplan.org before?

- Yes
- No
- Not sure

21. Have you ever logged in to the online course www.mycollegemoneyplan.org before?

- Yes
- No
- Not Sure

APPENDIX D

Wichita State University Institutional Review Board (IRB) Application

Section A: Administrative Information	
Principal Investigator Information	
(For a student project, Principal Investigator must be a WSU faculty member, student is listed as Co-Investigator)	
Name(s):	William Vanderburgh
Name(s) con't:	
Title:	Executive Director
College/Department Affiliation:	Office for Faculty Development and Student Success
Campus Phone Number:	3379
Campus Box:	97
E-mail Address:	william.vanderburgh@wichita.edu
Co-Investigator Information (<input type="checkbox"/> mark box if N/A)	
Name(s):	Gretchen Holthaus
Name(s) con't:	Tim Hagan
<input type="checkbox"/> Faculty Member <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student <input checked="" type="checkbox"/> Other, please specify: Office for Faculty Development and Student Success staff member	
College/Department Affiliation:	Educational Psychology Graduate Program, Employee of OFDSS
Phone Number:	3254, 3211
Address:	Box 97
E-mail Address:	gretchen.holthaus@wichita.edu, tim.hagan@wichita.edu
Education	
Has the PI and Co-Investigator (if applicable) taken the web-based course (CITI) in the protection of human subject research within the last 12 months? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Project Information	
Title of Project	Evaluation of the "My College Money Plan" Online Financial Literacy Course

Expected Completion Date May 2014

Type of Project	Class Project	Capstone Project	<u>Research</u>
Research Design	Experimental	<u>Quasi-Experimental</u>	
	Non-Experimental (e.g descriptive, correlation)	Qualitative	
	Secondary Data/Collection/Analysis	Program Evaluation	

Is the research funded or has funding been requested? Yes No
If "Yes", specify Sponsor: College Access Challenge Grant

Multi-Center Study: Will multiple institutions participate in the study? Yes No

If yes, please list all participating institutions:

Have any of the institutions listed above already approved the study? Yes No

Do you have proof of IRB approval? **If yes, please include copy of approval letter.** Yes No

Do you intend to publish or present the study's findings? Yes No

Potential Risk Exposure Physical Psychological Economical Legal Social

Please summarize the purpose of the proposed research using non-technical language that can be readily understood by someone outside the discipline:

The purpose of this research is to determine whether undergraduate students who participate in the online course (mycollegemoneyplan.org) exhibit any gains in knowledge of financial literacy, or reduction of financial stress as a result of participating in the course. Students enrolled in the WSU 101 Intro. to the University Course will complete 17 online modules that cover information like how to create a budget and track personal expenses. Participants will complete pre and post-tests online for class participation points using a number assigned by their instructor for tracking purposes. Participants will also have the opportunity to complete a measure of financial distress/well-being, as well as answer some basic demographic questions for extra credit. The financial distress scale/demographic information will require participant consent before completion. Students will complete the survey using the same deidentified number assigned to them by their instructor. Comparing participant scores on a pre and post-test will help the course instructors understand whether implementing MyCollegeMoneyPlan.org into their curriculum resulted in increased knowledge of finances. Students will earn participation points for completion of the online tests. The optional survey will be made available to study participants prior to beginning the online course, and after completion. This information will be used by the researchers to assess whether student financial stress levels changed following completion of the online course. Instructors will share deidentified participant pre and post-test scores from class with the researchers upon their discretion. This information will be used in combination with the financial stress/demographic information survey to account for any significant differences among participant's scores.

A separate survey will be made available to course instructors/peer mentors in the classroom, prior to the students taking their post-test. The survey will include basic questions over perceived increase in student financial knowledge, as well as ease in using the teaching resources available. Data will be analyzed by WSU CCSR to determine significant findings. A research associate will be present during the interpretation of the results. A summary of the results will be provided to the OFDSS office as well.

Please describe the benefits of the research to human subjects, if any, and of the benefits to human or scientific knowledge: Participants who engage in the online financial literacy course will receive important information that will help them to make smart financial decisions while enrolled in college. The content of this course was designed to improve the financial literacy of college students and we expect that students will benefit greatly from this experience.

This research will measure any gains in financial knowledge, as well as any change in reported financial stress levels that participants experience as a result of engaging in the online course. This information will help to guide the further development of the course. Since many educators are interested in adopting this online course for use in their schools, the results of research will allow for data-informed decision making.

Students will also earn extra credit points for participating in the online pre and post surveys for class. Students will have an additional option to write a paper for extra credit if they do not wish to participate in the online surveys.



Wichita State University Institutional Review Board (IRB) Application

Section B: Design, Methods, and Procedures

Fill in as applicable

Instruments: <input type="checkbox"/> Standardized Tests <input checked="" type="checkbox"/> Questionnaire <input type="checkbox"/> Interview <input checked="" type="checkbox"/> Internet <input checked="" type="checkbox"/> Other quizzes (specify): <input type="checkbox"/> Other (specify):	Recorded by: <input type="checkbox"/> Written Notes <input type="checkbox"/> Audiotape <input type="checkbox"/> Videotape <input type="checkbox"/> Photograph/film <input type="checkbox"/> Standard mail	Administered: <input type="checkbox"/> In person (group) <input type="checkbox"/> In person (individual) <input type="checkbox"/> Telephone <input type="checkbox"/> Mail <input checked="" type="checkbox"/> Electronic Mail <input checked="" type="checkbox"/> Other (specify): surveymonkey	Findings used for.... <input checked="" type="checkbox"/> Publication <input checked="" type="checkbox"/> Dissertation, Thesis <input type="checkbox"/> Needs assessment <input checked="" type="checkbox"/> Evaluation <input checked="" type="checkbox"/> Results to be released to (specify): Annual report to Board of Regents
---	---	---	---

Data will include.... (Check all variables, if no personal identifiers will be accessed please mark box)

<input type="checkbox"/> Names of People <input checked="" type="checkbox"/> Mailing or Email Addresses <input type="checkbox"/> Phone or Fax Numbers <input checked="" type="checkbox"/> Age <input checked="" type="checkbox"/> Gender <input checked="" type="checkbox"/> Ethnicity <input type="checkbox"/> Marital Status <input type="checkbox"/> IP Address <input type="checkbox"/> Date of Birth <input type="checkbox"/> License, Certificate or Vehicle ID	<input type="checkbox"/> Social Security Numbers <input type="checkbox"/> Medical Records <input type="checkbox"/> Biometric Identifiers <input checked="" type="checkbox"/> Income <input type="checkbox"/> Student ID# <input type="checkbox"/> Job Title <input type="checkbox"/> Names of employers <input type="checkbox"/> Types of employers <input type="checkbox"/> Other Information Specify-
--	--

Will this study involve the use of existing data, documents, records, and pathological specimen? Yes No
If "Yes", include a letter of authorization to access data if not publicly available.

Are Codes used to link data to the subject? Yes No

Do you anticipate using any data from this study for other studies in the future? Yes No
If "Yes", explain:

Describe each procedure step-by-step, including the frequency, duration, and location of each procedure:

Upon approval, co-investigators will visit WSU 101 classes inviting student participation in an evaluation of financial stress. Students will be informed that they will earn extra credit for participating in the surveys relating to financial stress.

Researchers will recruit participants from each WSU 101 section. Participants will be informed of the evaluation's purpose, the use of extra credit as an incentive, and have their questions answered in class. Students will complete an online pretest of their financial literacy as part of the course. Upon completion, students will be provided with the link to the online financial distress survey.

Participants will complete a survey over demographic information and their level of financial stress. They may complete the online survey in any location they choose, at whatever pace is most comfortable. Both the pre-test and survey will be completed at the beginning of the semester before any financial material is covered in class. Course instructors will assign the completion of Part I and II of mycollegemoneyplan.org to students in week 7 of the course. Instructors will then lead three lessons corresponding with the online course, using the teaching resources outlined on mycollegemoneyplan.org. After the third class period in week 8, students and instructors will have the opportunity to participate in a survey over the online course. Post-tests will be assigned to students, and the link to the extra credit survey will be made available online. Instructors and peer leaders wishing to complete a

survey over the course materials will be emailed the link after the third class lesson. Survey participants will be debriefed and provided with information on additional resources available to them in regard to managing personal finances. All class activities related to MyCollegeMoneyPlan.org will count towards participation points. The additional survey on financial stress will count for extra credit points as a part of this study. The instructor will maintain their pre and post-test data separately from the online survey.



Wichita State University Institutional Review Board (IRB) Application

Describe the nature and degree of the risks:
 Participants should not be subjected to any risk or discomfort by participating in this evaluation. Participation in the surveys and online course may heighten students' awareness of their financial situations, however. Since the optional survey will reflect many of the topics discussed in class, students could perceive the survey as affecting their grade or performance.

Describe how risks and discomforts (physical, psychological, or social) will be minimized:
 A debriefing will occur following the completion of the follow-up Financial Distress/Well-Being Scale to ensure that no undue stress has occurred as a result of participation in our evaluation. Information will be provided to the participants on resources such as the Financial Aid office on campus, the Counseling and Testing Center on campus, and the Consumer Credit Counseling Service, Inc. in Kansas. Researchers will visit classrooms and state that student participation in the extra credit survey is optional and won't affect course performance. The researchers will share that instructors will be notified of extra credit points to be awarded at the end of the semester.

Describe the steps you will take to ensure the confidentiality of the participants and data. Indicate how you will safeguard data that includes identifying or potentially identifying information (e.g. coding). Indicate when identifiers will be separated or removed from the data. Also, indicate where and how you will store the data and how long you plan to retain it. Describe how you will dispose of it (e.g. erasing tapes, shredding data).
 The researchers will not collect any identifying information from survey participants. Participants will complete pre/post-tests in class, as well as the optional survey online using an identification number assigned to them by the course instructor. The researchers will not have access to student names associated with identification numbers. In the case that a student indicates an intent to harm oneself or others, the principal investigator may receive contact information to assist a student, contingent on the IRB's approval. Participants will be informed about any identifying information that will be used in a consent document (attached) which they must agree to before agreeing to participate in the study.
 The initial participant data will be stored on a WSU computer under password that only the investigators are able to access. No identifying information will be available. Participant numbers will be assigned, and the key identifying which number matches each participant will also be stored on a password protected WSU computer that only the instructor may access. The use of the assigned numbers protects participants during data analysis and in publication of results. The only exceptions concerning confidentiality include indication of harm to oneself or others, which are noted in the consent form.
 Participant names will never be associated with numbers in data analysis or publication of results. The online pre and post-test surveys will be hosted by the lead instructor for WSU 101's Qualtrics account, which only the staff member may access. The online surveys will be created and administered on a surveymonkey.com account separate from the instructor's test results. All deidentified pre/post-test and survey data will be stored on a WSU computer protected by password that only the investigators may access. The results will be stored under the numbers that the participants were randomly assigned, with the key maintained separately by the course instructor.

Section C: Recruitment, Participants and Privacy
 Fill in as applicable if you will be recruiting human subjects

Subjects to be recruited (check all that apply)

<input checked="" type="checkbox"/> Adults (18+years)	<input type="checkbox"/> Elderly/Aged Persons
<input type="checkbox"/> Children and Minors (under 18 years)	<input type="checkbox"/> Minorities
<input type="checkbox"/> Cognitively Impaired Persons	<input type="checkbox"/> Pregnant Women
<input type="checkbox"/> Prisoners	<input type="checkbox"/> Other –describe

Number of Subjects: 150

Does this study involve participants who are not fluent in English? Yes No

Is Compensation Offered? Yes No



Wichita State University Institutional Review Board (IRB)
Application

Describe the recruitment process, including any advertisements, to be used for this study.
Students will be recruited via an in-class announcement by researchers explaining the purpose of the survey. They will also be offered the link to the extra credit survey after completing their pre and post-tests online.

Section D: Consent Process

Will you use a written informed consent document?
Will you obtain written assent for children and individuals under 18?
Will you obtain written parental or guardian permission for children and individuals under 18?
If requesting a waiver of written consent or assent, please provide rationale.

Describe the informed consent process (consent documents MUST be retained for three years beyond completion of the study):
All participants will be required to read and sign an electronic copy of a consent document (attached). Participants will not be allowed to progress through the online surveys without agreeing to the consent statement. They will be directed out of the survey if they do not agree to the consent statement. Participants will be instructed to print a copy of the informed consent document to keep. A note will be included in the document stating that copies of the consent forms will also be available in the Office for Faculty Development and Student Success upon request. Survey responses indicating acceptance of the informed consent document will be stored electronically. The documents will be password protected and will remain on the server for three years. Should the office cease to exist before the end of the three year period (as it is funded by grant on an annual basis), the documents will be stored on a server for the Office for Faculty Development and Student Success. After three years, the informed consent documents will be removed.

Section E: Attachments

- Consent Forms
Recruitment Notices or Advertisements
Survey Instruments, Psychological tests (other than standard, commercially available instruments), interview forms, or scripts to be used in research
Investigator's qualifications
Certificate of human subject research training (if available)
Other -specify:



Wichita State University Institutional Review Board (IRB) Application

Principal Investigator's Assurance

I certify that the information provided in this application is complete and correct to the best of my ability and knowledge.

I understand that as Principal Investigator, I have ultimate responsibility for the conduct of the study, the ethical performance of the project, the protection of the rights and welfare of human subjects, and strict adherence to any stipulations imposed by the IRB.

I agree to comply with all Wichita State University's policy and procedures, as well as all applicable federal, state and local laws regarding the protection of human subjects in research including, but not limited to the following:

- Performing the project by qualified personnel according to the approved protocol.
- Implementing no changes in the approved protocol or consent form without prior Wichita State University Institutional Review Board (IRB) approval (except in emergency, if necessary to safeguard the well-being of human subjects).
- Obtaining the legally effective informed consent from human subjects or their legally responsible representative, and using only the currently approved consent form with human subjects.
- Promptly reporting significant or untoward adverse affects to the Wichita State University Institutional Review Board (IRB) in writing within 5 working days of occurrence.

If I will be unavailable to direct this research personally, as when on sabbatical or vacation, I will arrange for a co-investigator to assume direct responsibility in my absence. Either this person is named as a co-investigator in this application, or I will advise the Wichita State University's Institutional Review Board (IRB) by letter, in advance of such arrangements.

I assure that I will retain research related records for audit including all documents subject to Human Subject welfare pursuant to the requirements of Title 45 CFR, Part 46 and Wichita State University Policy

Signature of Principal Investigator: _____	William Vanderburgh <small>Development and Student Success, email=william.vanderburgh@wichita.edu</small>	_____	Digitally signed by William Vanderburgh DN: cn=William Vanderburgh, o=Wichita State University, ou=Office for Faculty Date: 2013.08.07 13:22:57 -05'00'	_____	Aug 8, 2013
Co-Principal Investigator: _____	Gretchen Holthaus <small>email=gretchen.holthaus@wichita.edu, c=US</small>	_____	Digitally signed by Gretchen Holthaus DN: cn=Gretchen Holthaus, o, ou=OFDSS, Date: 2013.08.07 11:45:30 -05'00'	_____	Aug 8, 2013
Co-Principal Investigator: _____	Timothy Hagan	_____	Digitally signed by Timothy Hagan DN: cn=Timothy Hagan, o=OFDSS, ou, email=timothy.hagan@wichita.edu, c=US Date: 2013.08.07 13:53:51 -05'00'	_____	Aug 8, 2013
Co-Principal Investigator: _____		_____		_____	
Co-Principal Investigator: _____		_____		_____	
Co-Principal Investigator: _____		_____		_____	
Co-Principal Investigator: _____		_____		_____	
Co-Principal Investigator: _____		_____		_____	

Forms may be mailed, e-mailed or delivered to:
Office of Research Administration
1845 Fairmount Street, Campus Box 7
NIAR Building, Room 319

Questions should be directed to:
IRB Administrator
Email: IRB@wichita.edu
Phone: (316)-978-6803

Wichita, KS, 67260

APPENDIX E

Class 1 Lesson Plan

	Topics
	Modules 1-7 of My College Money Plan
	Learning Objectives
	Students will create a plan for how to meet the costs of college
	Students will understand how much debt is too much debt in earning their degree
✓	Activities
	Instructor will take attendance and send a list of students present to lead instructor.
	Ask the students what they found to be helpful in Part I of the online course mycollegemoneyplan.org
	Remind students that if they have not completed Part I yet, it and Modules 1-5 of Part II will need to be complete by Wednesday.
	Pass out the article “Student Loans Can Result in Debt that Won’t Go Away” and have students read it silently.
	Split students up into groups of 4-5 students and pass out the Discussion Questions Worksheet. Have the groups assign one note taker. Have the students work through the discussion questions together, recording their answers as they go. Call on groups to answer each of the questions and discuss aloud in class.
	Have groups move back to their individual seats and discuss the importance of having a financial plan that meets their 4 year academic plan so that they don’t take on too much debt.
	Pass out the “My College Financial Plan Worksheet” to students and read through the instructions together as a class. Explain to students that they will add up their costs on the left and ways to meet the costs on the right side of the chart. If the totals at the bottom do not equal up, they may need to find an additional source of income or reduce some of their expenses.
	Write on the board average numbers that students may plug in for their costs if they don’t know the actual numbers yet. They are: Tuition and fees: \$11,976 Books/Supplies: \$975 Room and Board: \$6,040 Personal Expenses: \$3,359
	Have students flip the financial plan worksheet over to the budgeting side. Ask students to start filling out budgeting information here. Let students know that they will need to have completed a budget for a paper that will be due next week. This activity should help them in writing their paper. Whatever they are not able to complete, they should take home and work on.
	Reminders
	Remind students that their homework is to complete Modules 1-5 of Part II by Wednesday.
	Students should log in to the online course using the same email/password combination.

APPENDIX F

Class 2 Lesson Plan

	Topics
	Modules 1-5 of Part II of My College Money Plan
	Learning Objectives
	Students will reflect on their short, medium, and long range goals
	Students will evaluate their needs versus wants and ways in which they may reduce spending.
✓	Activities
	Instructor will take attendance and send a list of students present to lead instructor.
	Ask the students what they found to be helpful in modules 1-5 of Part II of the online course, mycollegemoneyplan.org
	Remind students that all of Part I and II will need to be complete by Friday for their post-test.
	Pass out Short Medium and Long Range Goals Worksheet to students.
	Ask the students to complete a short, medium, and long range goal for their future, and then beneath it, write 3 goals for their finances.
	Ask the students if their future goals relate to their financial goals in any way. Why?
	Remind students that people who write down their goals in a place they can see them are more likely to accomplish those goals. Encourage them to post their goals in a place where they will see them.
	Have students turn their paper over to the other side. Have them think of needs versus wants and silently list them on their paper.
	Ask students if there are any areas that they could reduce a “want” to a “need”? How much money would they save if they did?
	Ask students to select one cost reduction strategy that they would commit to making in the next week. Students can write this down on their worksheet as a reminder. Examples may include not eating out for a week and making meals at home instead.
	Ask students how they would track what they were spending if they did not have a bank account. Alternatives may include cashing checks at Speedy Cash, Walmart, or by having a paycard. These other methods are outside of the mainstream economy because they often have fees/risks associated with them. Remind students that having a bank account is one of the first steps to financial independence.
	Tell students that 1 out of every 4 people do not have a bank account. This happens for many reasons and the class will explore some of those together.
	Section off a portion of the chalkboard. Tell the students that you want them each to come up to the board and write down 2-3 words that they think of when they hear the word “Bank”. Students can take turns writing their answers down and pass the chalk on to the next student. If you do not have a blackboard in your classroom, large posterboard should be used. Contact your lead instructor for these materials if needed.
	Once every student has written down their words, ask the students what words are similar and could be grouped together. Write down an overall “theme word” in a separate area on the chalkboard. Then cross off the words that fit into that theme. Do this until all answers have been grouped together.
	Review the themes the class came up with. Are some of them conflicting? For example, do students see banks as protecting their money, but also imposing fees?
	Explain that while there can be some negative things associated with having a bank, it is the safest way to secure your money. Additionally, most fees can be minimized if an individual tracks their spending and doesn’t overdraft. Remind students that the FDIC will secure their money up to \$250,000.
	Reminders
	Remind students that their homework is to complete Part II by Friday.
	Students should log in to the online course using the same email/password combination.
	Students will be given a post-test and an optional extra credit assignment on Friday. They should have all course modules completed by Friday.

APPENDIX G

Class 3 Lesson Plan

	Topics
	Modules 6-10 of Part II in My College Money Plan
	Learning Objectives
	Students will better understand how a credit score is determined
	Students will gain more understanding of the uses of a credit score
	Students will be able to identify factors that raise and lower credit scores
	Students will construct a plan for building a higher credit score
✓	Activities
	Instructor will take attendance
	Ask the students what they found to be helpful in Part II of the online course
	Remind students that if they have not completed Part I and II yet, that they should do so before taking the posttest due by Wednesday.
	Split students into groups of four and tell them that their team will be competing together for prizes.
	Pull up the “Who Wants to Be a Millionaire” Game
	Have peer mentors hand out answer sheets to each team.
	Give peer mentors answer keys to check groups’ answers.
	Explain to students that they can ask to have 50% of the choices removed on 1 question by their peer mentor, may “Phone a Peer Mentor” to help answer a question, and instead of polling the audience, they will be allowed to have a peer mentor remove one answer choice.
	Use a timer of your own, or go to http://www.timeanddate.com/timer/ to set an alarm for 30 seconds.
	Ask questions in corresponding order for each price point. Give the students 30 seconds to answer each question.
	Reminders
	Remind students that their homework is to complete Modules 1-5 of Part II by Wednesday.
	Students should log in to the online course using the same email/password combination.

APPENDIX H

Table 1. Descriptive Statistics of Major Variables

Variable	Men			Women			Total		
	Mean	SD	Skew	Mean	SD	Skew	Mean	SD	Skew
Pre FC	7.35	1.87	-.11	8.16	1.83	.03	7.92	1.87	.02
Post FC	8.66	1.54	.31	9.03	1.64	-.09	8.92	1.61	.04
Pre FWB	5.94	1.98	.03	5.15	2.05	.32	5.39	2.05	.21
Post FWB	6.20	2.10	-.19	5.10	1.95	.38	5.45	2.06	.22

- *Pre FC = Pre-test Financial Competency
- *Post FC = Post-test Financial Competency
- *Pre FWB = Pre-test Financial Well-being
- *Post FWB = Post-test Financial Well-Being
- *SD = Standard Deviation
- *Skew = Skewness

APPENDIX I

Table 2: Correlations Among Major Variables

	Pre FC	Post FC	Pre FWB	Post FWB	Age	P. Ed.
Pre FC						
Post FC	.470**					
Pre FWB	-.016	.018				
Post FWB	.004	.040	.828**			
Age	.037	-.180	-.216**	-.324**		
P. Ed.	.131	.036	.119	.139	-.202**	

**Correlation is significant at the .01 level (2-tailed)

Pre FC = Pre-Test of Financial Competency

Post FC = Post-Test of Financial Competency

Pre FWB = Pre-Test of Financial Well-Being

Post FWB = Post-Test of Financial Well-Being

P. Ed = Highest Level of Education Completed by a Parent