

5-11-2012

Financial Literacy of College Students and the Need for Compulsory Financial Education

Tysha Roz Llewellyn

The College at Brockport, trozllewellyn@gmail.com

Follow this and additional works at: <http://digitalcommons.brockport.edu/honors>



Part of the [Finance and Financial Management Commons](#)

Repository Citation

Llewellyn, Tysha Roz, "Financial Literacy of College Students and the Need for Compulsory Financial Education" (2012). *Senior Honors Theses*. 1.

<http://digitalcommons.brockport.edu/honors/1>

This Honors Thesis is brought to you for free and open access by the Master's Theses and Honors Projects at Digital Commons @Brockport. It has been accepted for inclusion in Senior Honors Theses by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmyers@brockport.edu.

Financial Literacy of College Students and the Need for Compulsory Financial Education

A Senior Honors Thesis

Presented in Partial Fulfillment of the Requirements for Graduation in the College Honors Program and the Ronald E. McNair Post-Baccalaureate Achievement Program

By
Tysha Roz Llewellyn
Finance Major

The College at Brockport State University of New York
May 11, 2012

Thesis Director: Dr. James Cordeiro, Professor, Business Administration and Economics

Educational use of this paper is permitted for the purpose of providing future students a model example of an Honors senior thesis project.

Abstract

Financial literacy is a measure of an individual's knowledge of financial concepts and their ability to use that knowledge to make critical decisions in the money management process. Literacy rates in America, as measured by behavioral indicators, are staggeringly low. Rates among teens and young adults have steadily declined over time and reached an all-time low in 2008 as recorded by a national survey by the Jump\$tart® Coalition for Personal Financial Literacy. Financial illiteracy, or the lack of financial knowledge, places an individual at a disadvantage in the American financial system when interacting with other economic agents, potentially leading to a lifetime of financial hardship. The consequences of the imbalance of power between consumers and service providers can be seen on a macroeconomic scale in the recent financial crisis.

A 49-question survey was administered to 51 participants in order to assess both the current financial literacy and the current decision-making capacity of undergraduate students. In addition, students were also assigned behavioral scores based on their financial habits over the last twelve months, and the relationships between behavior, decision-making ability, and financial literacy were explored.

The results of the assessments were poor. Twenty-nine students received a passing behavioral score of 60 out of 100 or higher with an average score of 62.1 percent. Only twenty-six respondents received a passing literacy score of 60 out of 100 or higher with the mean test score at 55.9 percent. Thirty-one respondents received a passing decision-making score of five out of eight or higher. The sample correlation coefficient between the

financial literacy and financial decision-making scores was 0.474, suggesting a direct relationship between the two variables. So, as financial literacy increases, so does the capacity to make good financial decisions.

Major obstacles to widespread financial literacy are a profound lack of basic technical and emotional skills, an inherent conflict of interest between financial service providers and their clients, and an increasingly complex financial system. A powerful way to overcome these obstacles and level the playing field between consumers and professionals is to mandate financial education in schools. By pooling federal, State, and private resources, it is possible to mend this gap in education and secure a more prosperous and well-informed future.

Table of Contents

Abstract	2
Acknowledgments	6
Introduction	7
Background	7
Definition	7
Literacy Statistics	8
Adults	9
Teens and Young Adults.....	10
Public Education	12
Obstacles to Financial Literacy	13
Basic Skills.....	13
Conflicts of Interest.....	13
Increasing Complexity of Consumer Finance.....	15
2008 Financial Crisis	15
Summary.....	15
Implications	21
Youth Financial Literacy and Education Organizations	24
National Endowment for Financial Education	25
The Jump\$tart Coalition for Personal Financial Literacy	26
Financial Literacy Education Commission	27
Methods	28
Financial Literacy and Decision-Making Questionnaire	28
Section I: About Your Habits	28
Section II: About Your Knowledge.....	28
Section III: About Your Decision-Making.....	28
Section IV: About You.....	29
Student Comments	29
Results	30
Demographics	30
Sections I, II, and III Scoring	31
Section I: About Your Habits	31
Section II: About Your Knowledge.....	32
Section III: About Your Decision-Making.....	33
Statistical Analysis.....	34
Discussion	35
Conclusion	38
List of Figures and Tables	39
Reference List	40
Appendix I	43
The State and Federal Roles in Education	43
Appendix II	47

Financial Literacy and Decision-Making Questionnaire..... 47
 Section I: About Your Habits 47
 Section II: About Your Knowledge 49
 Section III: About Your Decision-Making..... 51
 Section IV: About You 53
Appendix III 55

Acknowledgments

This thesis would not have been possible without the grace and favor of God.

I am very thankful to my thesis director, James Cordeiro, who guided my final study and provided his support and wisdom. I am also indebted to Sandeep Singh, who provided direction and encouragement as my advisor during the initial stages of my research.

I thank the College Honors Program for the opportunity to enrich my college career with the completion of this thesis. I thank also the Ronald E McNair Program and its directors, Barbara Thompson and Herma Volpe-van Dijk, for funding and emotional support.

Lastly, my gratitude extends to my family and friends, who loved me enough to push when I felt stuck.

Introduction

The purpose of this thesis is to (a) discuss general issues in the realm of financial literacy; (b) demonstrate how these issues surface in the case of high school and college students using (i), evidence from general statistics and (ii), evidence from survey results; and (c), review some available resources, challenges, and recommendations.

Background

Definition

Financial literacy involves an individual's ability to interpret and understand basic financial concepts and apply that knowledge to make informed decisions. Financial literacy is more than a measure of knowledge - it also reflects competency in actively managing one's own money from the point of accumulation to the point of consumption (Remund, 2010). Much like print literacy comes not by studying the alphabet but by stringing letters together to form words, words to form sentences, and sentences to form meaningful paragraphs, so does financial literacy build on the knowledge of these basic concepts and their use.

There are three primary benefits to being financially literate. Financial literacy plays a key role in preventing individuals from becoming involved with fraudulent financial transactions or engaging in financially destructive behavior (Comptroller of the Currency, 2011). Financial literacy is also advantageous for wealth preservation. Studies show that people who are more financially literate tend to be better at retirement planning, accumulating wealth, and avoiding debt. In fact, people who develop financial plans tend to be 10 to 15 percent wealthier than those who do not (Palmer, 2008). Finally, a financially

literate electorate is more able to understand macroeconomic problems and make informed decisions related to fiscal and monetary policies than an electorate that has not undergone financial education (Levin, 2012).

Literacy rates have been proven to vary among classes of individuals as defined by ethnicity, age, sex, socioeconomic background, and other categorizations. Among groups especially at risk for poor financial management are those who are unbanked, those with language barriers, the elderly, and those unfamiliar with personal financial management (Comptroller of the Currency, 2011).

Although low-income, underserved, and otherwise disadvantaged groups are more prone to financial mishap or poverty due to fiscal mismanagement, the need for financial literacy is universal and spans all classes. It is important not only for personal financial management, but also to prevent macroeconomic disasters like the recent global financial crisis from reoccurring¹. Thus, financial literacy is an important step towards long-term financial stability in America (Charles Schwab & Co., Inc., 2010).

Literacy Statistics

There is no standardized test or other evaluation to score financial literacy. When measuring financial literacy, both knowledge and behavioral patterns are examined in researcher-designed tests or surveys. In the following sections, “Adults” and “Teens and Young Adults” are considered two distinct subgroups to facilitate later discussion in this thesis.

¹ This will be further discussed in a later section entitled “2008 Financial Crisis.”

Adults

There is a low sense of accountability among Americans. Twenty-eight percent of adults admit to not paying all of their bills on time. Minority populations score significantly higher with African-Americans and Hispanics at 47 percent and 42 percent respectively. Eighty percent of adults feel there are situations where it is acceptable to default on a mortgage. Two of the top three most “justifiable” circumstances, as reported by respondents, place the blame on the lender (The National Foundation for Credit Counseling, 2010).

Comprehension among adults is also low. Thirty-three percent of mortgage holders report that the terms of their mortgage turned out to be different than what they initially expected. Dimensions that varied included: the amount of their monthly payment (14%); the interest rate (12%) or how long the initial rate lasted (9%); and the private mortgage insurance (PMI) they had to pay in addition to the new dollar amount of their mortgage after it reset (11%). Among mortgage holders, African-Americans and lower-income households are more likely than their Caucasian and high-income counterparts to have found that the terms of their mortgage were different than what they expected (The National Foundation for Credit Counseling, 2010).

Although 65 percent of adults “desire to become more financially responsible”, very few act on this desire by taking steps to improve their financial prowess. According to a 2010 survey by Charles Schwab & Co. Inc., while 64 percent of parents believe that financial fitness is more important than physical fitness, only 18 percent incorporate honing their financial skill as a part of a regular routine (Charles Schwab & Co., Inc., 2010). Sixty-five

percent of adults have not ordered a copy of their credit report in the past year, which is provided annually at no cost by the three major credit bureaus (The National Foundation for Credit Counseling, 2010).

The statistics for the long-term are even more dismal. Eighty-five percent of parents are worried about their financial future with the biggest worries pertaining to retirement (Charles Schwab & Co., Inc., 2010). However, 33 percent of adults have not started saving for retirement and 30 percent have no savings at all. African-Americans (50%) and Hispanics (38%) are more likely than Caucasians (25%) to not have any savings (The National Foundation for Credit Counseling, 2010).

Not surprisingly given the information, 78 percent of adults agree that they would benefit from guidance from an industry professional.

Teens and Young Adults

Teens and Young Adults are victim to the same disconnect between perception and reality of financial prowess as adults. According to a 2011 survey of 16- to 18-year olds, 77 percent of teens believe they are “financially savvy”, yet only 35 percent report knowing how to balance a checkbook or check the accuracy of a bank statement, and only 31 percent know how credit card interest and fees work (Charles Schwab & Co., Inc., 2011).

Gender differences are pronounced within this group. More men than women report knowing how to protect their personal information online, how credit card interest and fees work, whether a check cashing service is good to use, and what a 401(k) plan is

(Charles Schwab & Co., Inc., 2011). Women expect to earn about \$36,000 less than men when established in their careers, and only 13 percent of women report that their parents have spoken to them on the importance of investing compared with 23 percent of men (Charles Schwab & Co., Inc., 2011).

Knowledge of money management has declined compared to the results of the same survey conducted in 2007. This drop is especially pronounced among 18-year-olds. In 2007, 64 percent of 18-year-olds reported knowing how to manage a credit card compared to 39 percent in 2011. The percentage of 18-year-olds that know how credit card interest and fees work also fell from 43 percent to 32 percent, and the proportion with checking accounts fell 24 percentage points from 75 to 51 (Charles Schwab & Co., Inc., 2011).

In 2008, 6,856 12th grade students completed the Jump\$tart Coalition for Personal Financial Literacy biannual survey, achieving an average score of 48.3 percent, the lowest ever recorded (Mandell, 2008). These survey results underscore the gravity of the financial literacy crisis:

“While the founders of the Jump\$tart Coalition had hoped that the average score of 58.3 percent achieved in the baseline survey of 1997-98 would increase to a ‘passing’ score of at least 60 percent in 10 years, just the opposite occurred. Instead of increasing, scores fell by 10 percentage points in 10 years, revealing a situation that was becoming more and more dire.”

College students fared a bit better. In the same year, 1,030 full-time undergraduates scored an average of 62.2 percent on the Jump\$tart literacy survey, indicating that most college students are financially literate. However, only 28 percent of Americans graduate from

college, leaving the remaining 72 percent poorly equipped to make critical financial decisions (Mandell, 2008).

Financial independence is also on the decline. A 2010 survey on parents with children age 23-28 reports that 41 percent still provide financial support for their adult children; only 52 percent say their children are financially independent. College debt, unemployment, overspending, and consumer debt are cited as popular reasons for financial reliance. Parents also recognize the difference between indicators of financial responsibility and those of true financial literacy; while 48 percent believe that their children are financially responsible, only 23 percent say their kids are knowledgeable about money management (Charles Schwab & Co., Inc., 2010).

Public Education

The situation in schools is not much better. The trend has been slow, even retrograde movement to expand financial education as compulsory instruction. As of 2011, only 13 out of 50 states require high school students to complete a personal finance course before graduation. Twenty-two states require students to take only an economic course before graduating. However, only sixteen states require student knowledge in economics to be tested, three fewer than in 2009 (Council for Economic Education).

A lack of teacher confidence may be a cause for poor school performance with regard to financial education. According to a study conducted by the National Endowment for Financial Education® of kindergarten through 12th-grade teachers in states with financial

education guidelines, 64 percent reported feeling “not well qualified” to teach those standards (Siegel, 2010).

Obstacles to Financial Literacy

There are three major obstacles to widespread financial literacy: the underdevelopment of basic skills, the conflict of interest between industry professionals and their clients, and the increasing complexity of consumer finance.

Basic Skills

Good financial management requires adequate technical skills and the mastery of basic financial concepts. However, training in math and economics is lacking in many elementary and secondary schools. This is troubling because financial literacy necessitates that individuals make critical choices between sometimes imperceptibly differing quantitative alternatives. Without the necessary technical background, these potentially simple decisions become monumental affairs (Emmons, 2005).

Financial literacy also involves the mastery of basic emotional skills. Consumers must become proficient in exhibiting self-discipline, resilience to financial setbacks, and willingness to delay gratification in the face of temptation and easy credit opportunities. Unlike technical skills, emotional skills cannot be readily learned in a classroom setting, nor can the American culture of instant gratification be immediately reversed (Emmons, 2005).

Conflicts of Interest

Most banking professionals hold a fiduciary duty, which requires them to keep their clients' best financial interests their top priority. This is a widely held ethical standard in the

banking industry, along with suitability – the notion of offering only suitable products for a client’s specific needs (Siedle, 2010). However, there is an inherent conflict of interest between financial service providers and the clients they serve. Although all stockholder-owned banks, insurance companies, mutual-fund providers, investment brokers, and financial planners and advisors will claim to have their clients’ best financial interests at heart, these firms also exist to make a profit. Revenues are generated by charging high fees and loan rates, by disbursing low deposit rates and investment returns, and by encouraging greater use of their products and services (Emmons, 2005). Therefore, the ideas of fiduciary duty and suitability directly contradict the firm’s primary goal of profitability. As evidenced by current market success, financial service providers elect to place the goal of profitability ahead, if only slightly, of that of suitability or fiduciary duty:

“While CFA Institute expects charterholders to subscribe to a fiduciary standard, many in the brokerage industry are in positions in which they and their employers specifically do not accept this high standard of care. Instead, brokers often subscribe to a more lax ‘suitability’ standard--meaning they are free to promote products that benefit the broker, and brokerage, more than the client, as long as those products are not blatantly unsuitable (Siedle, 2010).”

Competition among financial service providers is expected to minimize the effects of this conflict of interest and promote efficiency in the industry. However, in light of reoccurring scandals in the financial services sector involving the abuse of client trust, doubt is cast on this notion.

There is also harm in conflicting and misleading communication from financial-services firms. Many consumers seeking assistance when making financial decisions may naively turn to industry professionals for guidance. However, owing to the same conflict between

fiduciary responsibility and profitability goals, advice from providers in this industry is also potentially tainted and geared toward generating more business rather than serving the consumer's best interest (Emmons, 2005). There is some credit given to firms in the industry that provide workshops and seminars to educate their client base. However, evidence must be examined to determine if these programs are effective at providing impartial information on the financial sector or if they are primarily used to create a positive public image and as a medium for engaging more clients.

Increasing Complexity of Consumer Finance

The steps on the stairwell toward financial well-being have grown numerous and treacherous in recent years. Not only are consumers now responsible for making more financial decisions (i.e. active retirement planning) but these decisions are also growing increasingly complex (i.e. qualified vs. non-qualified, defined-benefit vs. defined-contribution, Roth IRA vs. traditional IRA, 401(k), 503(b), pensions, etc.). The implications of this trend are discussed in detail in the following section using the recent financial melt down as a case study.

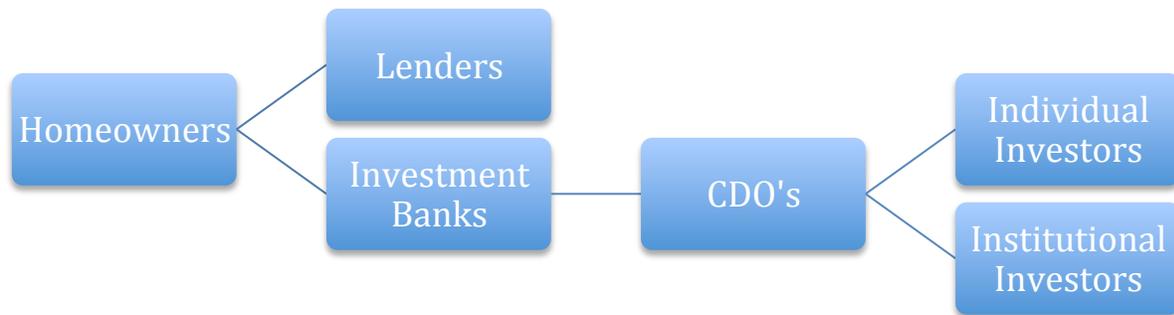
2008 Financial Crisis

Summary

In 2008, the United States suffered through its worse financial crisis since the stock market crash of 1929. The global recession that followed raised serious concerns about the relationship between individual investors and financial institutions, and what can be done to even the playing ground in the American financial system.

In the wake of the so-called “dot-com bust” of the early millennium and the September 11th terrorist attacks, Federal Reserve Chairman Alan Greenspan lowered interest rates to keep the economy robust. Low interest rates gave banks access to cheap credit and spurred an overuse of leverage. Leverage is the process by which banks borrow money to invest, pay back the principal along with any interest, and keep the difference.

Investment banks sought to profit during this free credit period by using leverage to purchase mortgages from lenders, pool them together, and sell bonds backed by those mortgages to investors. In other words, as homeowners made mortgage payments to the bank, the bank used those payments to make coupon payments to bondholders. The pool of mortgages that the bonds are issued against is called a Collateralized Debt Obligation (CDO). CDO's are sliced into varying tiers of riskiness called tranches, and investors are able to choose their degree of risk exposure. The riskier the tranches are, the higher the return will be on the bond. Through this process of packaging and selling existing mortgages as detailed in Figure 1, lenders are able to free up capital requirements and make new loans, institutional and individual investors are able to gain exposure to the credit and housing markets, and Wall Street is able to keep the difference for a hefty profit (Jarvis, 2010).

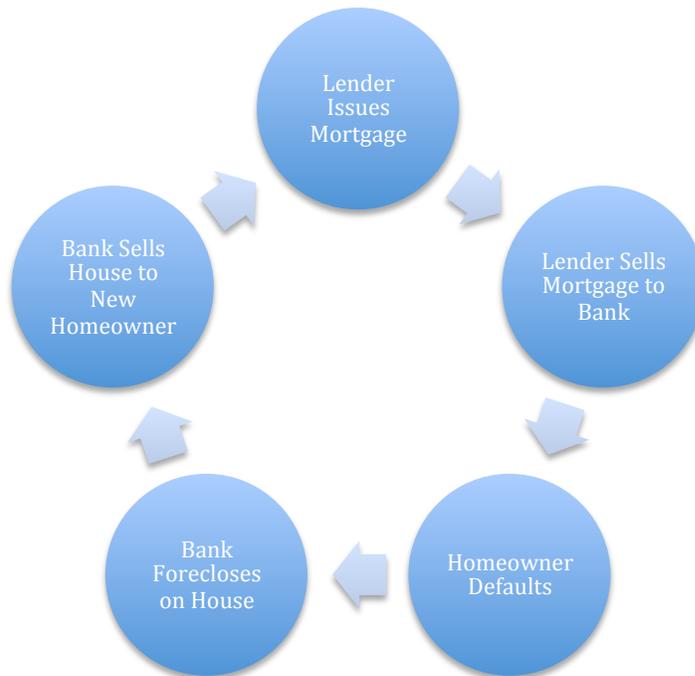
Figure 1: The Path of Mortgage Payments²

The success of mortgage-backed CDO's prompted banks to purchase more mortgages from lenders, who in turn issued an increasing number of mortgages. This proliferation in lending also coincided with the government's push for universal home ownership, and the two forces contributed to the formation of the housing bubble (Kuttner, 2010). At first glance, this seemed to be beneficial to all parties. However, there were a limited number of qualified borrowers, restricting the amount of new mortgages lenders could originate. It seemed that the system would soon grind to a halt. To overcome this problem, banks recognized that even if homeowners defaulted on their mortgage payments, they could still foreclose on and sell the house and, since it was believed that housing prices were always rising, collect enough money from the sale to pay back loans and make coupon payments to investors. This alternate source of revenue would replace mortgage payments. With a guaranteed escape plan in mind, lenders began to relax credit terms and offer mortgages to

² Figure 1. The Path of Mortgage Payments. Adapted from "Global Financial Crisis Explained [Motion Picture]," directed by J. Jarvis, 2010.

less qualified borrowers at higher rates. These are called subprime mortgages (Jarvis, 2010).

Figure 2: Cycle of Mortgage Defaults³

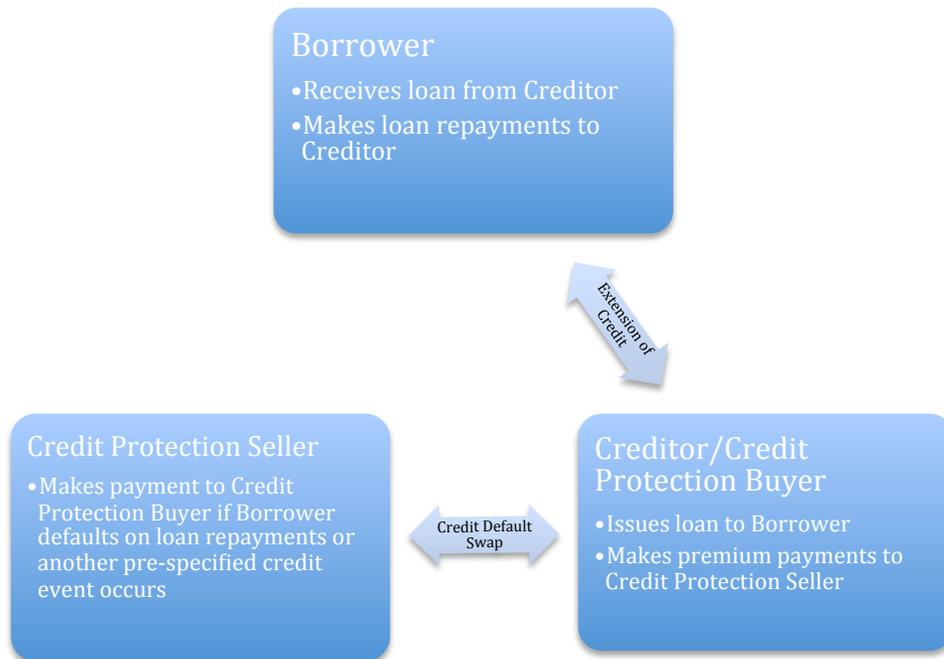


Not surprisingly, the number of defaults increased. As planned, banks put the foreclosures up for sale but, as more and more homeowners defaulted on their mortgage payments, a greater number of houses went up for sale. The real estate market became saturated and housing prices fell as supply surpassed demand. Homeowners who did not default on their mortgage payments suddenly found themselves underwater, or owing more than their house was worth. Many chose to walk away, leaving even more homes to the bank. Without mortgage payments or home sales to generate revenue, CDO's became worthless. Lenders were unable to sell new mortgages to the banks, banks were unable to sell more mortgage-

³ Figure 2. Cycle of Mortgage Defaults. Adapted from "Global Financial Crisis Explained [Motion Picture]," directed by J. Jarvis, 2010.

backed bonds to investors, and investors, many of whom were also homeowners, saw little to no return on even the safest tier of bonds (Jarvis, 2010).

The other cause of the crisis is rooted in the manipulation of the real estate market through the overuse of an unregulated class of financial instruments called credit derivatives. Credit derivatives are contracts that allow lenders to manage their exposure to credit risk. For example, a bank that is concerned about a certain borrower's ability to repay a loan might choose to transfer the default risk to another party while still keeping the loan on its books. This third party is called a protection seller, and the bank would be the protection buyer. The protection seller is required to pay the bank if a pre-specified credit event occurs that increases the risk that the loan will not be repaid, such as a missed payment or bankruptcy. In return for this insurance, the bank is required to make periodic premium payments to the protection seller (Lehman Brothers, 2001). This is one version of a credit derivative called a credit default swap, as illustrated in Figure 3.

Figure 3: Insurance Protection Using Credit Default Swaps⁴

What is troubling about credit default swaps is that protection sellers can re-sell their position to another insurer, allowing institutions to speculate on these contracts. Furthermore, CDS's are subject to counterparty risk, or the risk that when a claim is due, the protection seller will not be able to pay the protection buyer due to bankruptcy or other financial hardship (Gilani, 2008). This phenomenon is similar to an auto insurance company filing for bankruptcy the same day a policyholder is involved in an auto accident and files a claim; although the insured driver may have remitted all premiums necessary to continue coverage, the insurance company is simply unable to uphold its end of the contract due to financial shortcomings.

⁴ *Figure 3. Insurance Protection Using Credit Default Swaps. Adapted from "The Real Reason for the Global Financial Crisis...the Story No One's Talking About," by S. Gilani, 2008, Money Morning.*

Banks are the primary users of credit derivatives and employ them to hedge credit risk, reduce risk concentrations on their balance sheets, and free up regulatory capital (Lehman Brothers, 2001). In fact, banks used credit default swaps to insure the top tier of CDO's, keeping them at a deceptive AAA rating even as housing prices plummeted and mortgage payments flagged (Jarvis, 2010). The Financial Crisis Inquiry Commission, the body tasked with uncovering the cause of the melt down, discovered that when lending, large investment banks paid little attention to mortgage-related risks and permitted a significantly large exposure to subprime mortgages (Chan, 2011). This exposure was then mitigated through the credit derivatives market.

When housing prices began to fall, so did the value of the assets underlying the collateralized debt obligations on which these banks purchased credit default swaps. This occurrence triggered credit events in CDS contracts and suddenly, financial institutions were responsible for billions of dollars of "insurance claims". The entire financial system froze and credit protection sellers went bankrupt as banks scrambled to get their balance sheets in order. CDS's became worthless when the insurer failed, and the protection buyer was again fully exposed to the credit risk in the housing market. Without the safety net of credit insurance, banks were also required to write down billions of dollars in losses, pushing many more to bankruptcy (Gilani, 2008).

Implications

The worst part of this story is that it is nothing new. Since the deregulation of the banking industry, bankers have sought to profit from creating complex and risky financial instruments that appear to make money from thin air. Both prime and subprime mortgage

holders, as well as individual investors who purchased the mortgage-backed bonds were largely unaware of how clouded and treacherous the financial system had become. But in this case, the sword cut both ways. Banks were unaware of just how great their exposure was to the credit market due to the effects of financial engineering. Many purchased “safe” bonds in the same pool of mortgages they desperately tried to sell off their books. And, they distanced themselves from the same clients they were supposed to keep in fiduciary trust, causing public backlash.

The crisis also illuminated how little protection individuals have, as although unsavory and reckless, the acts taken by the investment banks were considered legal. And in the end, many large banks were considered “too big to fail” due to the effect bankruptcy would have on the financial system. Instead, the Troubled Asset Relief Program (TARP) as a part of the controversial 2008 Economic Emergency Stability Act rescued the elect few. Expenditures by TARP do not include other “bailouts” such as the Capital Purchase Program, the Maiden Lane Transactions, or the Federal takeover of mortgage enterprises Freddie Mac (FHLMC or Federal Home Loan Mortgage Corporation) and Fannie Mae (FNMA or Federal National Mortgage Association) (Federal Reserve Bank of St. Louis). The scope of the bailout programs left many financially strained Americans to wonder about the fairness of the playing field. The Financial Crisis Inquiry Commission agreed in their final report:

“The commission that investigated the crisis casts a wide net of blame, faulting two administrations, the Federal Reserve and other regulators for permitting a calamitous concoction: shoddy mortgage lending, the excessive packaging and sale of loans to investors and risky bets on securities backed by the loans (Chan, 2011).”

In July of 2010, Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act. This act, among other initiatives, attempts to eliminate loopholes that allow risky practices to go unregulated, provide shareholders with greater say on executive pay, increase transparency and accountability for credit rating agencies to protect investors, and end the possibility of future “too big to fail” bailouts funded by taxpayers (United States Senate Committee on Banking, Housing, & Urban Affairs).

The Dodd-Frank Act also established the Bureau of Consumer Financial Protection (CFPB), cited as “a new independent watchdog, housed at the Federal Reserve, with the authority to ensure American consumers get the clear, accurate information they need to shop for mortgages, credit cards, and other financial products, and protect them from hidden fees, abusive terms, and deceptive practices” (United States Senate Committee on Banking, Housing, & Urban Affairs). The CFPB has a strong mandate to promote financial literacy education, which is important to the general public for more than just personal wealth preservation, it is absolutely imperative to understand the big picture of the American financial system, and how default in Athens, Greece can affect the price of baby formula in Jamaica, New York:

“What the Bureau and everyone else needs to understand is that financial literacy involves more than learning how to balance a checkbook or understanding what APR means—particularly in times when financial matters dominate the headlines. In addition to the microeconomics of personal financial management, the electorate needs to understand enough of the macro to figure out who's doing what to whom, to not become numbed by those big numbers, to get through the political spin that accompanies every announcement from Washington, and to learn the lessons provided by history and events in other parts of the world (Levin, 2012).”

The need for greater financial literacy in the United States is apparent. The global financial crisis brought to light not only a disturbing lack of transparency and integrity on Wall Street, but also an equally unsettling lack of financial know-how on the part of investors. The crisis, however, renewed the desire for consumers and investors to become more involved with their finances and pay greater attention to financial statements and contracts (Charles Schwab & Co., Inc., 2010).

With financial engineering made possible through the deregulation of banking, the industry is constantly generating new, complex financial products, leaving regulators and consumers to unravel and demystify such complex derivatives as collateralized debt obligations. The results are twofold: investors are finding it increasingly difficult to make informed decisions, and there is a notable imbalance of information shared between investors and bankers in the American financial system. While government intervention and increased regulation can provide a temporary fix, it may only be a matter of time before the industry again finds ways to circumvent the letter of the law. Thus, it is imperative to arm the masses with the knowledge necessary, to protect themselves and their finances.

Youth Financial Literacy and Education Organizations

Support for financial education programs is particularly strong during periods of weak economic performance because the effects of money mismanagement are more readily apparent. The period between January and mid-April, also known as tax season, is an especially popular time for financial education. Adult education programs tend to be more prevalent than youth programs, and some member organizations, such as credit unions,

hold their own classes and seminars year round. However, the popularity of these programs cannot mend the current gap in youth financial education. In fact, examination of two national financial education programs and the Financial Literacy Education Commission reveals that this gap stems not from a lack of resources, but from an absence of government action.

National Endowment for Financial Education

The National Endowment for Financial Education® is a leading private nonprofit foundation dedicated to improving the financial welfare of all Americans. The Denver-based organization evolved from the College of Financial Planning, the nonprofit organization that fostered the Certified Financial Planner designation, a standard of excellence among financial planners. The Endowment is financially independent and influence free; it does not raise revenue from the sale of services or products or accept outside funding. The NEFE partners with other noncommercial entities to provide free financial education programs and materials for individuals at every stage of life (National Endowment for Financial Education).

In 1984, the NEFE developed the High School Financial Planning Program (HSFPP) to address youth financial literacy. HSFPP approaches financial education with a focus on personalized budget planning, meaning that students learn not only how to budget, but also actually make one. The program consists of both teacher and student manuals and provides access to a large collection of web resources, visual aids, and tools (NEFE High School Financial Planning Program). Program goals are stated below:

“As a result of taking part in the NEFE High School Financial Planning Program, students will build confidence, apply practical skills, and exhibit sensible behaviors related to money management. Specifically, they will build confidence to make financial decisions related to managing personal financial resources, building earning capacity, protecting assets, and adapting to unexpected events; apply sound foundational financial decision making principles immediately after completing the program and in the future; (and) exhibit mindful money management behaviors that will be of immediate and future benefit to themselves and their families (NEFE High School Financial Planning Program).”

The NEFE also sponsors CashCourse, a provider of financial education resources for colleges.

The Jump\$tart Coalition for Personal Financial Literacy

The Jump\$tart Coalition is a well-known nationwide body that promotes personal financial literacy among the nation’s youths. The Washington D.C.-based non-profit organization was founded in 1995 to advance the financial literacy of students from pre-kindergarten through college, and has since developed a comprehensive curriculum and advanced many initiatives to provide support and promote awareness including the Jump\$tart National Educator Conference, the Jump\$tart Teacher Training Alliance, and America Saves (Jump\$tart Coalition).

The Coalition “asserts that all young people graduating from our nation’s high schools should be able to take individual responsibility for their personal economic well-being.” To this end, the coalition has developed The National Standards in K-12 Personal Finance Education. The National Standards serve as a guide for both new and established personal finance instructors. The model also allows flexibility for educators to design their own finance courses while still meeting the standards (Jump\$tart Coalition for Personal Financial Literacy, 2007).

By creating a general framework for financial literacy education, the Jump\$tart Coalition meets the need for teacher training and a well-developed curriculum for primary and secondary schools.

Financial Literacy Education Commission

The Financial Literacy and Education Commission (FLEC) was created in 2003 through the Fair and Accurate Credit Transactions (FACT) Act. The FLEC is comprised of 22 federal entities and is chaired by the U.S. Secretary of the Treasury. One of the commission's chief responsibilities is to develop a national strategy to promote financial literacy and education. In 2006, FLEC developed its first national strategy, *Taking Ownership of the Future: The National Strategy for Financial Literacy*, which called to action a symposium to identify research priorities for promoting personal and family financial security. The initiative was followed in 2011 by *Promoting Financial Success in the United States: The National Strategy for Financial Literacy*. The commission also developed a national financial education web site (MyMoney.gov) and hotline (U.S. Department of the Treasury, 2012).

As a federal entity, the FLEC's scope is limited to settings outside public classrooms and to date, the FLEC has effected no visible change in compulsory financial education⁵.

⁵ See Appendix I for more information on the State and Federal roles in education.

Methods

Financial Literacy and Decision-Making Questionnaire

A 49 question web-based survey was administered to undergraduate students using the survey host SurveyMonkey®. The survey was held between January 31, 2012 and March 31, 2012. The purpose of this questionnaire was to ascertain the current level of financial literacy among undergraduate students and the relationship between behavior, literacy, and accurate decision-making. The survey also contained two optional sections that asked for additional comments regarding the respondent's financial education history and ability to make personal finance decisions. These are addressed as "Student Comments".

Section I: About Your Habits

Questions one through ten in Section I of the survey are designed to gather behavioral information from respondents. Answers to these questions present a picture of financial history and provide an indicator of past financial decision-making. Question eleven probes respondents on their preparedness to manage their own finances upon graduation on a seven-point scale from Very Prepared to Not At All Prepared.

Section II: About Your Knowledge

The ten questions in Section II test respondents on their knowledge of basic financial concepts in insurance, investing, banking, and credit.

Section III: About Your Decision-Making

Each of the eight questions in Section III presents an actor in a hypothetical situation. The actor has made a critical financial decision. Respondents are asked to evaluate this decision

within the context of the situation on a seven-point scale from Very Poor Financial Management to Very Good Financial Management.

Section IV: About You

The questions in Section IV provide demographic information about the sample population, with the exception of the last two questions in the survey.

Student Comments

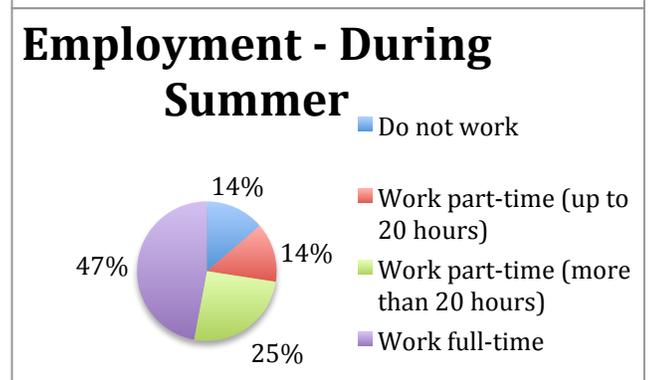
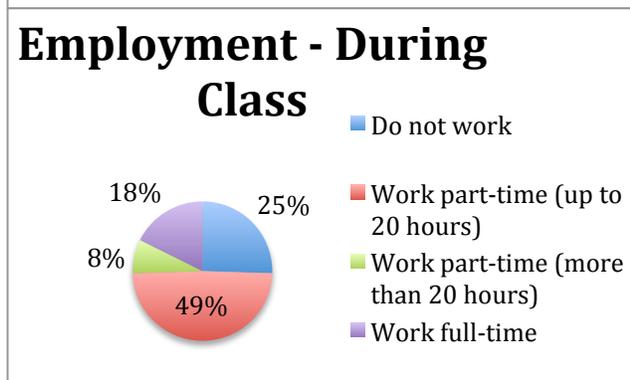
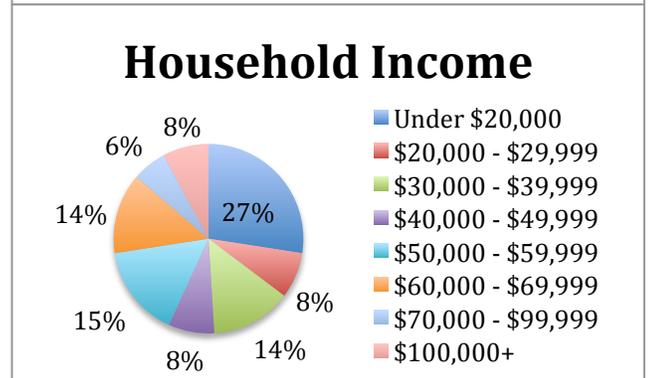
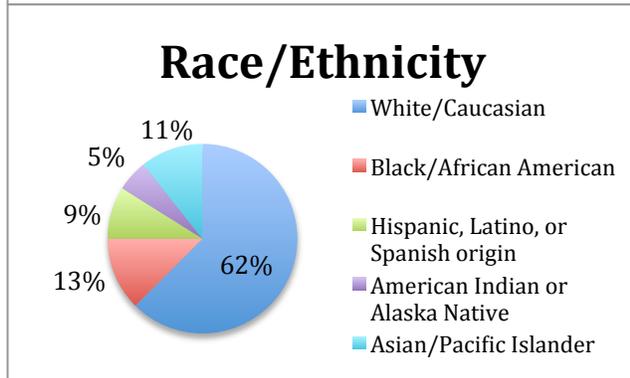
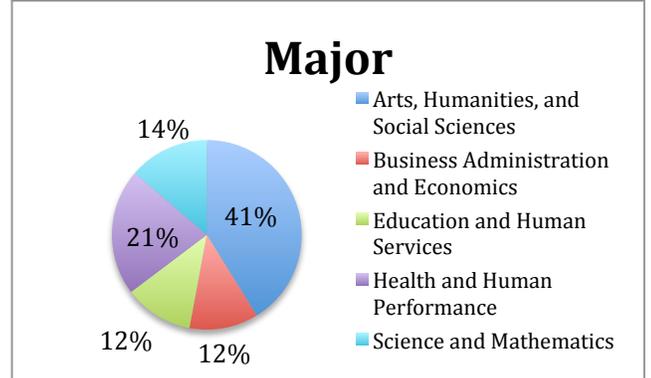
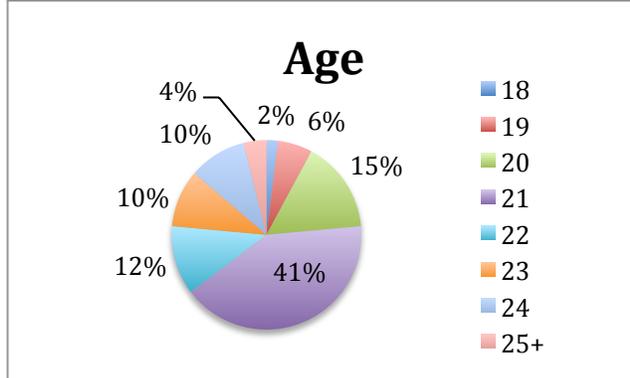
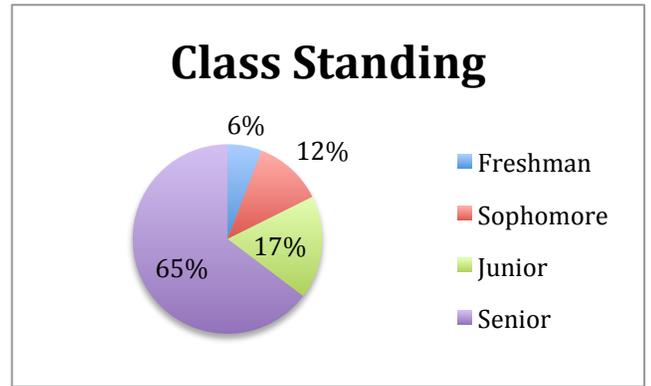
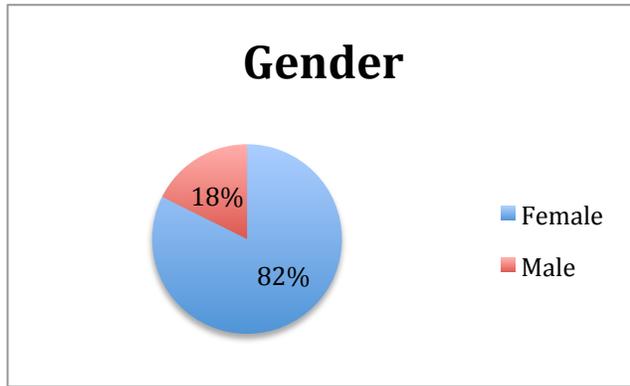
The final two survey questions provide respondents with the option of sharing any additional information regarding their ability to manage their finances⁶.

⁶ Student comments are available for review in Appendix III.

Results

The survey generated 51 responses. Demographic information is reported below.

Demographics



Sections I, II, and III Scoring

Respondents were assigned scores based on their responses to survey questions on financial habits (Section I), knowledge of financial concepts (Section II), and decision-making (Section III)⁷.

Section I: About Your Habits

Respondents were rated on their financial habits based on their responses to the questions highlighted in the table below. If a respondent was not eligible to answer a question (i.e., no credit card, no checking/savings account), that question was not used to score that respondent or factored into the scoring process. Questions below marked with an asterisk (*) are answers that improved a respondent's overall score by one point. Respondents who scored at least 60 percent were considered to have generally positive financial habits. Twenty-nine respondents scored above 60 percent. The average score was 62.1 percent, indicating that respondents overall displayed positive financial habits.

Table 1: About Your Habits Response Summary

Question	Response Choices	Responses	
1. Own/Use Credit Card	Yes	32	62.7%
	No	19	37.3%
2. Responsible for card payments	Yes	27	84.4%
	No	5	15.6%
3. Paid credit card in full	Yes*	12	44.4%
	No	15	55.6%
4. Credit card payment history	Most months full payment*	6	40.0%
	Most months more than minimum*	7	46.7%
	Most months minimum	2	13.3%
5. Late payments	Yes	4	14.8%
	No*	23	85.2%
6. Exceeded credit limit	Yes	3	9.4%
	No*	29	90.6%
7. Have checking/savings	Yes	49	96.1%
	No	2	3.9%
8. Check bank statement for accuracy	Balance checkbook carefully*	5	10.2%
	Check accuracy then file*	14	28.5%

⁷ See Appendix II for the entire survey with unabridged questions and answer choices.

	Check accuracy then discard*	9	18.4%
	Do not check accuracy	21	42.9%
9. Have online banking	Yes, use with computer only*	22	44.9%
	Yes, use with computer and phone*	13	26.5%
	Yes, but don't use it	10	20.4%
	No	4	8.2%
10. Set budget for spending	Yes, written budget, stick to it*	4	7.8%
	Yes, written budget, don't stick to it	2	3.9%
	Yes, unwritten budget, stick to it*	17	33.3%
	Yes, unwritten budget, don't stick to it	5	9.8%
	No	23	45.1%

Section II: About Your Knowledge

Ten multiple-choice questions were posed to respondents regarding their knowledge of financial concepts in order to determine financial literacy. The passing score for the knowledge test is 60 percent (six correct questions out of ten). Twenty-six respondents received passing scores on the exam. The average literacy score was 55.9 percent, an overall failing score. The median score was 60.0 percent.

Table 2: About Your Knowledge Response Summary

Question	Response Choices	Responses	
1. Matt and Kaseem – factors affecting loan rates	Kaseem will pay less because the car is collateral for the loan.	26	51.0%
	They will both pay the same because they have almost identical financial backgrounds.	16	31.4%
	They will both pay the same because the rate is set by law.	7	13.7%
	Matt will pay less because people who travel are less risky.	2	3.9%
2. Credit report rights	Your credit report can be checked once a year for free	36	70.6%
	Your credit report can only be requested through your bank for a small fee.	11	21.6%
	All credit reports are the sole property of the U.S. Government and access is only available to lenders.	3	5.9%
	You can only check your credit report if you are denied credit.	1	2.0%
3. Parents' health insurance benefits	You may be covered by your parents' insurance until you are 26 years old, regardless of your dependency status.	44	86.3%
	You continue to be covered by your parents' insurance until you are married, regardless of your age.	3	5.9%
	You continue to be covered by your parents' insurance as long as you live at home, regardless of your age.	2	3.9%
	If your parents become unemployed, your insurance coverage is not affected if you are enrolled in school.	2	3.9%
4. Investing	Your investments are not insured by the government and may end up worthless.	31	60.8%

	You are not permitted to open a brokerage account without passing an investing entrance exam.	9	17.6%
	You are not permitted to open a brokerage account unless your income is above the poverty level.	7	13.7%
	Trusting your money to a financial consultant will guarantee your long-term financial well-being.	4	7.8%
5. Sarah - factors affecting mortgage rates	She does not have enough cash for her down payment.	25	49.0%
	She declared bankruptcy fifteen years ago.	10	19.6%
	She has never had a credit card or any other kind of loan.	9	17.6%
	She missed her last insurance payment.	7	13.7%
6. Auto insurance covering damage to your car in an accident	Collision	28	54.9%
	Liability	15	29.4%
	Comprehensive	7	13.7%
	Term	1	2.0%
7. Purpose of insurance	protect yourself from sustaining a catastrophic loss	36	70.6%
	protect yourself from a loss recently incurred	8	15.7%
	protect yourself from small, incidental loss	6	11.8%
	provide yourself with excellent investment returns	1	2.0%
8. Investment terms – early withdrawal	Certificate of deposit	30	58.8%
	Common stock	9	17.6%
	Money market account	9	17.6%
	Savings account	3	5.9%
9. Savings in a commercial bank	all of the above	28	54.9%
	is used to provide loans for individuals and businesses	10	19.6%
	is managed by the FDIC	10	19.6%
	will yield a competitive interest rate that is always higher than the current inflation rate	3	5.9%
10. Best interest rates for short-term loans	Credit union	33	64.7%
	Savings bank	9	17.6%
	Commercial bank	5	9.8%
	Payday loan company	4	7.8%

Section III: About Your Decision-Making

The final section features eight situations for which respondents are asked to judge the actions taken by the actors. The actions are either considered Good or Poor financial management. Respondents who identify at least five out of the eight decisions correctly are considered to have good decision-making skills. Respondents who answered “Neither Poor nor Good Financial Management” are considered to have responded incorrectly for that question. Thirty-one respondents received scores of five or more, indicating students were generally good decision-makers.

Table 3: About Your Decision-Making Response Summary

Situation	Response Choices	Responses	
1. Mary's CD	Very Good/Somewhat Good	4	7.8%
	Very Poor/Somewhat Poor	10	19.6%
	Neither	37	72.5%
2. Nidhi's Loan	Very Good/Somewhat Good	32	62.7%
	Very Poor/Somewhat Poor	13	25.5%
	Neither	6	11.8%
3. Antonio's Insurance Policy	Very Good/Somewhat Good	10	19.6%
	Very Poor/Somewhat Poor	29	56.9%
	Neither	12	23.5%
4. Sakura's IRA	Very Good/Somewhat Good	20	39.2%
	Very Poor/Somewhat Poor	22	43.1%
	Neither	9	17.6%
5. Kelly and Micah's College Savings Plan	Very Good/Somewhat Good	27	52.9%
	Very Poor/Somewhat Poor	17	33.3%
	Neither	7	13.7%
6. Sarah's Checkbook	Very Good/Somewhat Good	5	9.8%
	Very Poor/Somewhat Poor	41	80.4%
	Neither	5	9.8%
7. Julian's Inheritance	Very Good/Somewhat Good	11	21.6%
	Very Poor/Somewhat Poor	30	58.8%
	Neither	10	19.6%
8. Vincent's Credit Crisis	Very Good/Somewhat Good	32	62.7%
	Very Poor/Somewhat Poor	13	25.5%
	Neither	6	11.8%

Statistical Analysis

The sample correlation coefficient between financial habits and financial literacy is approximately 0.056. The sample correlation coefficient between financial habits and decision-making is approximately -0.058. Neither of these values indicates a significant relationship between either set of values. However, the sample correlation coefficient between financial literacy and financial decision-making is 0.474, suggesting a direct relationship between the two sets of scores. In other words, as financial literacy increases, so does the capacity to make good financial decisions.

Discussion

Financial illiteracy in the United States is epidemic. Although awareness has increased following the global financial crisis, literacy rates have continued to drop. This disconnect between desire and action stems from a lack of access to education and shallow understanding of what concepts must be mastered to be truly financially literate. This is evidenced in various surveys, as many report that respondents' perception of their own financial prowess is consistently higher than reality. As a result, a dangerously low percentage of persons engaging in financial transactions fully understand their true terms, conditions, and implications. The American financial markets operate on the idea that economic agents, or participants in the markets, have equal access to information and will make a rational decision based on that information. But with consumers and individual investors poorly equipped to search for information and make financial decisions, the result is an imbalance of power.

Survey results indicate that financial literacy and financial decision-making are directly correlated; the more literate a consumer is, the more likely they are to possess good financial decision-making skills. This supports the development of rational economic agents participating in financial transactions, and mitigates the imbalance of power between consumers and financial institutions.

Falling financial literacy rates over time among teens and young adults suggest that less is being learned now in schools and from parents than in the past. This phenomenon is not due to a lack of information sharing, as many survey respondents acknowledge that they

have received some financial guidance⁸. More likely, there is simply more to learn now about personal finance than in the past; the financial industry has become extremely complex and Americans are now responsible for making more personal finance decisions than ever before, making literacy even more difficult to attain. Another contributor to low literacy rates is lacking math training in primary and secondary schools, and declining economics and personal finance courses in high schools (Emmons, 2005).

Financial literacy is a science and takes time to master; it cannot be achieved by taking a seminar or five-month economics course in high school or college. Students cannot be reasonably expected to learn the alphabet in Kindergarten and then write a comprehensive research report fifteen years later in high school without any more training between these two points in time. So it follows that learning monetary units at age five then taking a personal finance course at age seventeen would prove equally ineffective; and it has. Formal financial education must be offered sooner than high school, ideally beginning in primary school.

The Financial Literacy and Education Commission should collaborate with the Department of Education and State governments to develop a cohesive strategy for delivering financial education to the nation's schools. A joint effort by these entities would speed the smooth delivery of financial education. Resources pooled by the FLEC and the ED would ensure that every school has access to adequate funding and support, leaving local governments

⁸ See Appendix III.

and school districts free to customize curricula for the individual needs of their communities.

Despite potential protests from State and local governments and their advocates, such as the National Conference for State Legislatures, the federal government must be involved with delivering financial education to schools because financial illiteracy is an immediate national crisis. This is not to be misconstrued as support for a nationalized curriculum or increased federal scrutiny; the federal government must encourage the States to require financial education in schools through the use of incentives and by providing support, but leave the details to State and local governments. And with already established curricula and teacher resources provided by national literacy programs like the Jump\$tart Coalition and the National Endowment for Financial Education®, the challenge is implementation by local entities.

Conclusion

There is no shortage of available financial education resources for students, nor are these resources costly. The problem is raising awareness at the State and local levels and bridging the gap between federal and local powers to provide quality education to the nation's schools. Even as the case for financial education builds with recent evidence from the global financial crisis, State and local government are cutting school literacy programs. Although there are some obstacles to making personal finance courses mandatory, the benefits will last a lifetime and extend far beyond the individual.

Future opportunities for research exist in a closer analysis of the relationship between financial education, positive financial habits, and decision-making over time. Existing research does not fully address time as a factor in becoming financially literate. It may also be worthwhile to explore the counterintuitive lack of correlation between habitual behavior and decision-making, and between habitual behavior and financial literacy. Finally, future research may focus on developing a standardized measure of financial literacy that can be tracked at every grade level.

List of Figures and Tables

Figure 1: The Path of Mortgage Payments17

Figure 2: Cycle of Mortgage Defaults18

Figure 3: Insurance Protection Using Credit Default Swaps20

Table 1: About Your Habits Response Summary.....31

Table 2: About Your Knowledge Response Summary32

Table 3: About Your Decision-Making Response Summary34

Table 4: Student Responses to Financial Guidance Prompt55

Table 5: Student Responses to Open-Ended Comment Section.....55

Reference List

- Brown-Nagin, T. (n.d.). *Elementary and Secondary Education Act of 1965*. Retrieved March 25, 2012, from eNotes: <http://www.enotes.com/elementary-secondary-education-act-1965-reference/elementary-secondary-education-act-1965>
- Chan, S. (2011, January 25). Financial Crisis Was Avoidable, Inquiry Concludes. *The New York Times* .
- Charles Schwab & Co., Inc. (2011). *2011 Teens & Money Survey Findings: Insights Into Money Attitudes, Behaviors and Expectations of 16- to 18-year-olds*.
- Charles Schwab & Co., Inc. (2010). *Charles Schwab 2010 Families & Money Survey: Insights into Money Attitudes, Behaviors and Concerns of The Sandwich Generation*.
- Chen, H., & Volpe, R. P. (1998). An Analysis of Personal Financial Literacy Among College Students. *Financial Services Review* , 7 (2), 107-128.
- Comptroller of the Currency. (2011, June). *Financial Literacy Fact Sheet*. Retrieved March 3, 2012, from Office of the Comptroller of the Currency: <http://www.occ.treas.gov>
- Council for Economic Education. (n.d.). *Survey of the States*. Retrieved March 21, 2012, from Council for Economic Education: <http://www.councilforeconed.org/news-information/survey-of-the-states/>
- Cude, B. J., Lawrence, F. C., Lyons, A. C., Metzger, K., LeJeune, E., Marks, L., et al. (2006). College Students and Financial Literacy: What They Know and What We Need to Learn. *Eastern Family Economics and Resource Management Association 2006 Conference* , 102-109.
- Davis, K., & Bagwell Durband, D. (2008). Valuing the Implementation of Financial Literacy Education. *Financial Counseling and Planning* , 19 (1), 20-30.
- Eitel, S. J., & Martin, J. (2009). First- Generation Female College Students' Financial Literacy: Real and Perceived Barriers to Degree Completion. *College Student Journal* , 43 (2), 616-630.
- Emmons, W. R. (2005). *Consumer-Finance Myths and Other Obstacles to Financial Literacy*. Federal Reserve Bank of St. Louis.
- Federal Reserve Bank of St. Louis. (n.d.). *The Financial Crisis: A Timeline of Events and Policy Actions*. Retrieved March 18, 2012, from Federal Reserve Bank of St. Louis: <http://timeline.stlouisfed.org/index.cfm?p=timeline>
- Financial Literacy and Education Commission. (2011). *Promoting Financial Success in the United States: National Strategy for Financial Literacy 2011*.
- Ford, M. W., & Kent, D. W. (2010). Gender Differences in Student Financial Market Attitudes and Awareness: An Exploratory Study. *Journal of Education for Business* , 85, 7-12.
- Fox, J., Bartholomae, S., & Lee, J. (2005). Building the Case for Financial Education. *The Journal of Consumer Affairs* , 39 (1), 195-214.
- Gale Encyclopedia of US History. (n.d.). Department of Education.

- Gallery, G., & Gallery, N. (2010). Rethinking Financial Literacy In The Aftermath Of The Global Financial Crisis. *Griffith Law Review* , 19 (1), 30-50.
- Gavigan, K. (2010, March/April). Show Me the Money Resources: Financial Literacy for 21st-Century Learners. *Library Media Connection* , 24-27.
- Gilani, S. (2008, September 18). The Real Reason for the Global Financial Crisis...the Story No One's Talking About. *Money Morning* .
- Huston, S. J. (2010). Measuring Financial Literacy. *The Journal of Consumer Affairs* , 44 (2), 296-316.
- Jarvis, J. (Director). (2010). *Global Financial Crisis Explained* [Motion Picture]. United States of America.
- Johnson, E., & Sherraden, M. S. (2007). From Financial Literacy to Financial Capability among Youth. *Journal of Sociology & Social Welfare* , XXXIV (3), 119-146.
- Jump\$tart Coalition. (n.d.). *About the Jump\$tart Coalition for Personal Financial Literacy*. Retrieved March 19, 2012, from Jump\$tart Coalition for Personal Financial Literacy: <http://www.jumpstart.org/>
- Jump\$tart Coalition for Personal Financial Literacy. (2007). *National Standards in K-12 Personal Finance Education*. Retrieved March 21, 2012, from Jump\$tart Coalition for Personal Financial Literacy: <http://www.jumpstart.org/national-standards.html>
- Jump\$tart Coalition for Personal Financial Literacy. (2007). *National Standards in K-12 Personal Finance Education*. Washington.
- Kelly, C. (2002). *Financial Literacy in Schools*. Credit Union National Association, State Government Affairs, Washington, DC.
- Kuttner, R. (2010, June 13). Don't Blame The Dream of Home Ownership. *The Huffington Post* .
- Lehman Brothers. (2001). *Credit Derivatives Explained: Market, Products, and Regulations*. Structured Credit Research.
- Levin, A. (2012, February 18). Financial Illiteracy: Root of World Money Crisis. *ABC News* , p. 3.
- Mandell, L. (2008). *The Financial Literacy of Young American Adults: Results of the 2008 National Jump\$tart Coalition Survey of High School Seniors and College Students* . University of Washington and The Aspen Institute.
- National Conference of State Legislatures. (n.d.). *Education at a Crossroads: A New Direction for Federal and State Education Policy*. Retrieved March 24, 2012, from National Conference of State Legislatures: <http://www.ncsl.org/issues-research/educ/education-at-a-crossroads-a-new-direction-for-fe.aspx>
- National Conference of State Legislatures. (n.d.). *Mission and Governance*. Retrieved March 24, 2012, from NCSL: <http://www.ncsl.org/about-us.aspx?tabs=1027,77,544#1027>
- National Council on Economic Education. (2005). *Survey of the States: Economic and Personal Finance Education in Our Nation's Schools in 2004*. Survey.

- National Endowment for Financial Education. (n.d.). *About Us: National Endowment for Financial Education*. Retrieved March 23, 2012, from National Endowment for Financial Education: <http://www.nefe.org/AboutUs/tabid/56/Default.aspx>
- NEFE High School Financial Planning Program. (n.d.). *About our Program*. Retrieved March 23, 2012, from NEFE High School Financial Planning Program: <http://hsfpp.nefe.org/home/channels.cfm?chid=97&tid=1&deptid=14>
- No Child Left Behind. (2004, August 4). *Education Week* .
- Palmer, K. (2008, April 2). The Financial Literacy Crisis. *U.S. News Money* .
- Remund, D. L. (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. *The Journal of Consumer Affairs* , 44 (2), 276-295.
- Rotfeld, H. J. (2008). Financial Aliteracy. *The Journal of Consumer Affairs* , 42 (2), 306-309.
- Syedean, M., & Yi, T. D. (2011). Improving Financial Literacy of College Students: A Cross-Sectional Analysis. *College Student Journal* , 45 (1), 177-189.
- Siedle, E. (2010, August 9). Investors Misled By Brokers Masquerading As Fiduciaries. *Forbes* .
- Siegel, T. B. (2010, April 9). Working Financial Literacy in With the Three R's. *The New York Times* .
- The National Foundation for Credit Counseling. (2010). *The 2010 Consumer Financial Literacy Survey Final Report*. Harris Interactive Inc.
- The New York Times. (1979, July 12). House narrowly passes Department of Education bill. *The New York Times: The Spokesman-Review* , p. 64.
- U.S. Department of Education. (n.d.). *About ED*. Retrieved March 23, 2012, from ED.gov: <http://www2.ed.gov/about/landing.jhtml?src=ln>
- U.S. Department of the Treasury. (2012, February 15). *Financial Literacy and Education Commission*. Retrieved March 21, 2012, from U.S. Department of the Treasury: <http://www.treasury.gov/resource-center/financial-education/Pages/commission-index.aspx>
- United States Senate Committe on Banking, Housing, & Urban Affairs. (n.d.). *BRIEF SUMMARY OF THE DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT*. Retrieved March 18, 2012, from United States Senate Committe on Banking, Housing, & Urban Affairs: <http://banking.senate.gov/public/>
- USLegal, Inc. (n.d.). *Federalism*. Retrieved March 24, 2012, from USLegal: <http://system.uslegal.com/federalism/>

Appendix I

The State and Federal Roles in Education

The United States Constitution establishes a government based on the sharing of power between the national (federal), and State and local governments. Federalism, as this power sharing is known, was adopted to prevent the centralization of government and to protect local interests. Under the Tenth Amendment of the Constitution, certain powers are delegated to the federal government exclusively with all other powers not specifically ascribed to the federal government being reserved for the States. The national and local governments also share some concurrent powers, such as the right to tax and maintain courts. Lastly, there is a fourth class of powers called implied powers. These powers are not delegated to the federal government in the Constitution, but are understood to be needed and permitted by the “necessary and proper” clause (Article I, Section 8, Clause 18), which states that Congress has the power “to make all laws which shall be necessary and proper for carrying into execution the foregoing powers” (USLegal, Inc.).

In 1980, Congress established the U.S. Department of Education (ED) under the Department of Education Organization Act (U.S. Department of Education). This law combined, among other programs, the Office of Education, the Defense Department’s schools for overseas dependents, the Agriculture Department’s graduate school, and college housing loans administered by the Department of Housing and Urban Development into a new cabinet-level Department. The Department’s creation was opposed by a majority of House Republicans, who worried that the law would lead to federal control of local education (The New York Times, 1979).

The opposition also argues that the law violates the Tenth Amendment as the Constitution does not explicitly delegate education as a federal power, and so it must be reserved for the States. Supporters counter that power over education funding is granted to the national government under the Taxing and Spending Clause (Article I, Section 8, Clause 1) and the Commerce Clause (Article I, Section 8, Clause 3), which gives Congress the right to regulate commerce among the States. Further justification for the Department of Education is given by the need to guard the right of equal access to public institutions and provide equal opportunity within them (Gale Encyclopedia of US History).

The ED's mission is "to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access" (U.S. Department of Education).

Education is primarily a State and local responsibility. The Department of Education underscores this point, stating that, "It is States and communities, as well as public and private organizations of all kinds, that establish schools and colleges, develop curricula, and determine requirements for enrollment and graduation" (U.S. Department of Education).

The No Child Left Behind Act of 2001 (NCLB) exemplified the tension between national and local government with regards to education. The act came about at a time of wide public concern about the quality of education, and sought to provide additional relief to States for efforts to close achievement gaps and promote accountability in schools. NCLB supports

standards-based education reform, a concept that asserts that setting high standards and establishing measurable goals can improve individual outcomes in education. States are required to set their own achievement standards and issue assessments to all students at certain grade levels. If States make their achievement goals, they are granted additional federal funding. This initiative substantially expanded the federal role in education (No Child Left Behind, 2004).

The No Child Left Behind Act is the most recent reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA). ESEA was originally passed to fund primary and secondary schools and close achievement gaps between students. More importantly, the act emphasizes equal access to education for disadvantaged students. Funding to schools is primarily provided under Title I of ESEA, which appropriates money to schools and school districts with a high percentage of students from low-income families. Funds are authorized for professional development, instructional materials, resources to support educational programs, and parental involvement promotion. Titles II and III of ESEA provide additional funding to school systems for library materials, after-school programs, and other resources; however, the majority of federal funding is funneled through Title I. The act was originally authorized through 1970 and has been reauthorized every five years since its enactment (Brown-Nagin). It is important to note that Congress did not advocate a nationwide curriculum as a means to close achievement gaps.

The No Child Left Behind Act differs substantially from the original Elementary and Secondary Education Act in its scope and detail, and the Department of Education has been

criticized for its intrusion in what is largely held to be a State power. The National Conference of State Legislatures, a bipartisan organization that advocates on behalf of the nation's 50 States, does not view federal involvement in education favorably (National Conference of State Legislatures):

“By statute and constitution our system of K-12 education administration is overwhelmingly a state responsibility. The prescribed federal role is one of supplementing state and local efforts, providing additional resources for disadvantaged learners and conducting research into best practices and proven reforms.

“The effects of federal policy are now grossly disproportionate to its contribution to the K-12 endeavor. If we continue on our current policy path, federal resources, which now account for slightly more than 7 percent of the enterprise, will drag the entire system into the rabbit-hole world where compliance with federal dictums masquerades as reform (National Conference of State Legislatures).”

Appendix II

Financial Literacy and Decision-Making Questionnaire

Section I: About Your Habits

1. Do you own or use a credit card?
 - a. No (please skip to question 7)
 - b. Yes

2. Are you the primary person who makes payments on your credit card?
 - a. No (please skip to question 6)
 - b. Yes

3. Over the past 12 months, have you always paid your credit card balance in full?
 - a. No (please skip to question 5)
 - b. Yes

4. Over the past 12 months, which of the following best describes your credit card payment history?
 - a. Most months paid in full
 - b. Most months made more than minimum payments but did not pay in full
 - c. Most months made minimum payments
 - d. Most months failed to make minimum payments

5. Over the past 12 months, how many times have you paid your credit card late?

6. Over the past 12 months, how many times have you “maxxed out” (met or exceeded the limit) on your credit card?

7. Do you have a checking or savings account?
 - a. No (please skip to question 10)
 - b. Yes

8. The last time you examined your bank statements, how did check for inconsistencies?
 - a. I do not regularly check my bank statements for inconsistencies
 - b. I balanced the checkbook carefully
 - c. I checked the accuracy of transactions then filed them
 - d. I checked the accuracy of transactions then discarded/shredded them

9. Do you have online banking?
 - a. No
 - b. Yes, but I don't use it
 - c. Yes, and I use it with a computer only
 - d. Yes, and I use it with a computer and mobile phone

10. Do you regularly set a budget for your spending?

- a. No
- b. Yes, I set a written budget and stick to it
- c. Yes, I set a written budget but don't stick to it
- d. Yes, I set an unwritten budget and stick to it
- e. Yes, I set an unwritten budget but don't stick to it

11. How prepared are you to manage your own finances upon graduation?

Very
Prepared

Not at all
Prepared

Section II: About Your Knowledge

1. Matt and Kaseem are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Matt has borrowed \$6,000 to take a foreign vacation. Kaseem has borrowed \$6,000 to buy a car. Who is more likely to pay less in interest?
 - a. Matt will pay less because people who travel overseas are less risky.
 - b. They will both pay the same because they have almost identical financial backgrounds.
 - c. Kaseem will pay less because the car is collateral for the loan.**
 - d. They will both pay the same because the rate is set by law.

2. Which of the following statements best describes your right to check your credit history for accuracy?
 - a. All credit reports are the property of the U.S. Government and access is only available to lenders.
 - b. You can only check your credit report if you are denied credit.
 - c. Your credit report can be checked once a year for free.**
 - d. Your credit report can only be requested through your bank for a small fee.

3. Many young people receive health insurance benefits through their parents. Which of the following statements is true about this kind of health insurance coverage?
 - a. You continue to be covered by your parents' insurance as long as you live at home, regardless of your age.
 - b. You continue to be covered by your parents' insurance until you are married, regardless of your age.
 - c. You may be covered by your parents' insurance until you are 26 years old, regardless of your dependency status.**
 - d. If your parents become unemployed, your insurance coverage is not affected if you are enrolled in school.

4. Which of the following is true regarding investing?
 - a. You are not permitted to open a brokerage account unless your income is above the poverty level.
 - b. You are not permitted to open a brokerage account without passing an investing entrance exam.
 - c. Your investments are not insured by the government and may end up worthless.**
 - d. Trusting your money to a financial consultant will guarantee your long-term financial well-being.

5. Sarah is looking to purchase her first home. She is shopping for mortgage interest rates. Which of the following will not affect her chances of getting a good interest rate?
 - a. She declared bankruptcy fifteen years ago.**

- b. She has never had a credit card or any other kind of loan.
 - c. She missed her last insurance payment.
 - d. She does not have enough cash for her down payment.
6. If you have caused an automobile accident, which type of insurance would cover damage to your car?
- a. Term
 - b. Collision**
 - c. Comprehensive
 - d. Liability
7. The main reason to purchase any kind of insurance is to
- a. protect yourself from a loss recently incurred
 - b. provide yourself with excellent investment returns
 - c. protect yourself from sustaining a catastrophic loss**
 - d. protect yourself from small incidental loss
8. Which of the following investments requires that you keep your money invested for a specified period of time or suffer an early withdrawal penalty?
- a. Savings account
 - b. Money market account
 - c. Certificate of deposit**
 - d. Common stock
9. Your savings account in a commercial bank
- a. will yield a competitive interest rate that is always higher than the current inflation rate
 - b. is used to provide loans for individuals and businesses**
 - c. is managed by the FDIC
 - d. all of the above
10. Assuming you have graduated, which of the following institutions can usually offer you the best interest rate for a short-term loan?
- a. commercial bank
 - b. savings bank
 - c. credit union**
 - d. payday loan company

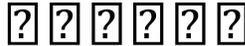
Section III: About Your Decision-Making

Read each situation carefully then mark the box that best reflects your reaction.

<p>1. Mary has recently graduated from college and is searching for a job. She has \$4000 in savings. She has no source of income and no credit history. Considering that she does not anticipate finding a job for at least six months, Mary put all of her money in a six-month certificate of deposit.</p>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Very poor</td> <td style="width: 30%; text-align: center;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> <td style="width: 30%; text-align: right;">Very good</td> </tr> <tr> <td>Financial Management</td> <td></td> <td style="text-align: right;">Financial Management</td> </tr> </table>	Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good	Financial Management		Financial Management
Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good				
Financial Management		Financial Management				
<p>2. Nidhi recently suffered a loss in her family and needs a personal loan to help pay for the funeral arrangements. She has been offered two loans by two different banks. The loan from Bank A is quoted at 10% APR compounded monthly. The loan from Bank B is quoted at 10% APR compounded quarterly. Both loans have a life of two years. She took the loan from Bank B believing that she would pay less over time.</p>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Very poor</td> <td style="width: 30%; text-align: center;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> <td style="width: 30%; text-align: right;">Very good</td> </tr> <tr> <td>Financial Management</td> <td></td> <td style="text-align: right;">Financial Management</td> </tr> </table>	Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good	Financial Management		Financial Management
Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good				
Financial Management		Financial Management				
<p>3. Antonio recently graduated college and is in his early twenties without any dependents. He has repaid all of his education loans and has decided to live at home in order to save money. Believing that he is worth more as a college graduate, he purchases a whole life insurance policy for \$500,000.</p>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Very poor</td> <td style="width: 30%; text-align: center;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> <td style="width: 30%; text-align: right;">Very good</td> </tr> <tr> <td>Financial Management</td> <td></td> <td style="text-align: right;">Financial Management</td> </tr> </table>	Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good	Financial Management		Financial Management
Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good				
Financial Management		Financial Management				
<p>4. The economy is in recession and the stock market has been doing poorly over the last two years. Sakura, who is in her twenties and has no dependents, invested \$100,000 in a well-diversified mutual fund before the economic downturn and the current value of that investment is now \$90,000. She is saving for retirement and the funds are in an IRA (Individual Retirement Account). She sold her shares and is planning on keeping her money in a savings account until the market recovers.</p>						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Very poor</td> <td style="width: 30%; text-align: center;"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </td> <td style="width: 30%; text-align: right;">Very good</td> </tr> <tr> <td>Financial Management</td> <td></td> <td style="text-align: right;">Financial Management</td> </tr> </table>	Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good	Financial Management		Financial Management
Very poor	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Very good				
Financial Management		Financial Management				

5. Kelly and Micah just had a baby. They received money as baby gifts and want to put it away for the baby’s education. A friend who works in finance informed them that they have a choice of investing in corporate bonds, treasuries, stocks, and certificate of deposits. Believing that stocks will have the highest growth over periods of time as long as 18 years, they have invested the money in a diversified portfolio of stocks.

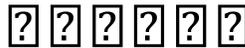
Very poor
Financial Management



**Very good
Financial Management**

6. Sarah recently graduated college and moved to California. She is living on her own and is balancing her checkbook for the first time. Sarah realizes that she does not have enough money to cover her expenses for the month. Sarah’s mom calls her from Florida to let her know that she will mail her a check for \$5000 in a week to help her pay for her expenses. Sarah records this \$5000 she will receive in the future as an addition to her checking account now and writes checks against the new balance for her expenses.

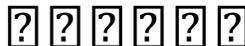
**Very poor
Financial Management**



Very good
Financial Management

7. Julian has recently graduated from college and is not employed. He inherits his late father’s estate, which is valued at \$175,000 before taxes. Anticipating this windfall, he enters into a contract to purchase a home for a down payment of \$75,000. Julian also plans to pay off his student loan debt of \$75,000 and use the remaining sum to pay the funeral home for its services totaling \$25,000.

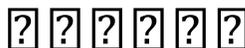
**Very poor
Financial Management**



Very good
Financial Management

8. Vincent is a single father who has recently lost his job. Tragically, his young son falls ill and Vincent uses all of his savings to pay for an expensive surgery. Vincent cannot find another job and uses credit cards and loans to pay for his living expenses for a year, causing him to fall into massive debt. Realizing that his situation will only get worse, Vincent declares bankruptcy.

Very poor
Financial Management



**Very good
Financial Management**

Section IV: About You

1. You are:
 - a. Male
 - b. Female

2. With what race/ethnicity do you most closely identify? (circle more than one if appropriate)
 - a. White/Caucasian
 - b. Black/African American
 - c. Hispanic, Latino, or Spanish origin
American Indian or Alaska Native
 - d. Asian/Pacific Islander

3. What is your age in years?

4. What is your primary major field of study?

5. What is your class standing?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

6. What is your employment status during the semester?
 - a. Do not work
 - b. Work part-time (up to 20 hours)
 - c. Work part-time (more than 20 hours but less than full time)
 - d. Work full-time

7. What is your employment status during the summer?
 - a. Do not work
 - b. Work part-time (up to 20 hours)
 - c. Work part-time (more than 20 hours but less than full time)
 - d. Work full-time

8. What do you estimate was your total household income immediately before attending college? (If you lived with your family, this would be your family's combined income)
 - a. Under \$20,000
 - b. \$20,000 - \$29,999
 - c. \$30,000 - \$39,999
 - d. \$40,000 - \$49,999
 - e. \$50,000 - \$59,999
 - f. \$60,000 - \$69,999

- g. \$70,000 - \$99,999
 - h. \$100,000 - \$150,000
 - i. Over \$150,000
9. Did anyone ever explain how to manage your finances before attending college? (family, workshop in school, etc.) If so, how?
10. Is there anything else you would like to state regarding your ability to make decisions regarding your personal finances?

Appendix III

Table 4: Student Responses to Financial Guidance Prompt	
somewhat in the form of keeping track of how much I have and spend	
Not before, but during my freshman year we had a speaker speak to us in regards of this topic for my academic planning seminar course.	
I was never taught how to balance a checkbook because of online banking but my mother has always told me to check my accounts. I am also learning as I go along and constantly asking my mother questions.	
No	
Not really. Mom just told me to not spend money on useless things.	
no.	
No	
Family and Scouting Workshops. Also, economics in high school was a helpful class with an excellent teacher to explain the importance of credit, etc.	
My parents always drove home the importance of paying off credit card debt. I took out only one credit card with a limit of 300, and never maxed it out. Though I wasn't always able to pay it off in full, I always paid more than the minimum, and paid it off every time I could. Currently, I have it all paid off and I am not using it to avoid racking it up again. I'm putting that lesson to my student loans now, and I am paying extra on them each month.	
NO	
Corporate Finance Course	
In bits and pieces. My finance class in high school was helpful, but in the end I still have little to no idea what I'm doing. I am totally baffled by credit, loans, and the intricacies of the tax world.	
yes, family, school, and self knowledge	
No	
no	
Yes. However, there was always a cushion I could fall on. In regards to managing and paying for my car, clothes, and food that was all out of pocket. However, paying for college my parents took care of. The true financial talk is on the way.	
no	
No	
yes, father	
Family. Explained simple things about payments, balancing check books, credit cards, etc.	
No	
no.	
yes, family and accounting class	
No	
yes--father taught me about investing/budgeting	
classes in school, the Suzie Orman show	
No	
no	
yes	
no	
Workshop in school A government Class	
No	
Yes, financial workshops. We were told to set up a college savings/checking account. Interest would not be as high for college students, and it would show us how to spend our money.	
no	
while attending, school workshops	
family	
not really	
No	

My family told me to live within my means and to always pay credit cards and loans off on time
No
only small pieces of advice here and there
No
Family
yes, an economics class
no
Yes. My middle school required all students to take a home and careers class, which covered balancing a check book. In high school we had to take an economics class. Also, my parents had me read one of Dave Ramsey's books, in which he challenges all consumers to eliminate their debt.
Nope
No.
yes: sociology of Money course.
no
Financial Literacy Workshop in school over the winter break

Table 5: Student Responses to Open-Ended Comment Section

Although I work and do not let myself go broke, I still have not had as much real world financial experience that would lead me to believe that I could handle living costs on my own post college.
Dave Ramsey's Financial Peace University program is the bomb--that's where I've learned pretty much everything I know and the reason why I have a budget now
I am excellent at making payments in full and on time, and that's about the extent of my financial abilities. I would have liked to have taken a course or a class that would help me better understand finances, as most of this survey confused me.
I have absolutely no idea what most of these questions, or what the words in the questions meant
I need a financial adviser.
I probably shouldn't be allowed to do anything with out supervision.
i'm confused
It is extremely confusing, so I had to guess on the majority of the questions. I am not at all prepared to handle my own finances.
It sucks :(I don't like money anymore, now that it matters.
learn as I go
only buy what you can afford. never spend or swipe more than you can swallow.