

**FINANCIAL LITERACY AND THE FINANCIAL DECISION MAKING  
OF INDIVIDUALS IN UNDERSERVED COMMUNITIES**

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## **ABSTRACT**

Better access to financial literacy programs in underserved communities has the potential to improve financial decision making and to help individuals and families escape poverty. This multimethod dissertation explores some of the challenges of developing financial literacy programs for underserved individuals and provides insights into the cultural and institutional factors that discourage financial literacy and sound financial decision making. This research re-examines the construct of financial literacy, reviews relevant past research, and presents a conceptual model with hypotheses regarding factors that affect financial literacy. To test the model, multiple studies were conducted in underserved communities in rural and urban areas to understand the complexity of the relationship between financial literacy and financial decision making. These studies were supplemented by a series of in-depth interviews with financial literacy experts, community leaders, and underserved individuals. The results indicate the importance of refining both financial literacy instruments and training to rural and urban underserved communities, while also building stronger ties to community leaders and financial institutions.

**Keywords: Financial Literacy, Poverty, Underserved Communities, Financial Decisions**

Dedicated to my wife, Nicol Martin my children Desmond and Denyera and my two  
grandchildren Labron and Madison.

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**TABLE OF CONTENTS**

**ABSTRACT.....ii**

**DEDICATION.....iii**

**ACKNOWLEDGEMENTS.....iv**

**LIST OF TABLES.....viii**

**INTRODUCTION.....ix**

**ESSAY 1: INTRODUCTION TO FINANCIAL LITERACY IN UNDERSERVED COMMUNITIES.....1**

**Literature Review.....3**

**Conceptual Model and Hypotheses.....20**

**Research Methodology.....31**

**Results.....35**

**Theoretical and Managerial Significance.....36**

**Conclusion.....39**

**ESSAY 2: AN EMPIRICAL EXAMINATION OF THE EFFECT OF A FINANCIAL SEMINAR ON FINANCIAL LEARNING .....41**

**Research Methodology.....44**

**Results (Fairfax Station, VA & Saint Louis, MO) .....54**

<b>Contribution.....</b>	<b>60</b>
<b>ESSAY 3: A COMPARISON OF PERCEPTIONS OF THE CHALLENGES OF FINANCIAL LITERACY AND FINANCIAL DECISION MAKING IN UNDERSERVED COMMUNITIES .....</b>	<b>63</b>
<b>Research Motivation.....</b>	<b>63</b>
<b>Methodology.....</b>	<b>64</b>
<b>Findings of Interviews.....</b>	<b>70</b>
<b>Conclusions and Contributions.....</b>	<b>81</b>
<b>CONCLUSION .....</b>	<b>84</b>
<b>REFERENCES.....</b>	<b>88</b>
<b>APPENDICES</b>	
<b>A. FINANCIAL LITERACY PRE-TEST .....</b>	<b>101</b>
<b>B. FINANCIAL LITERACY POST-KNOWLEDGE CHECK.....</b>	<b>102</b>
<b>C. DEMOGRAPHICS SURVEY.....</b>	<b>105</b>
<b>D. SCHEDULE OF SEMINARS .....</b>	<b>107</b>
<b>E. REVISED FINANCIAL LITERACY PRE-TEST .....</b>	<b>108</b>
<b>F. REVISED FINANCIAL LITERACY POST-TEST .....</b>	<b>111</b>
<b>G. DEMOGRAPHICS SURVEY (REVISED).....</b>	<b>114</b>
<b>H. FINANCIALRELEVANCY - SAINT LOUIS, MO - FOCUS GROUP .....</b>	<b>116</b>
<b>I. FINANCIAL RELEVANCY – FINANCIAL EXPERT .....</b>	<b>120</b>

<b>J. INTERVIEW QUESTIONS FOR FINANCIAL LITERACY RESEARCH ..</b>	<b>124</b>
<b>K. INTERVIEW REQUEST PERMISSION FORM.....</b>	<b>126</b>
<b>L. INSTITUTIONAL REVIEW BOARD APPROVAL FORM.....</b>	<b>127</b>
<b>M. INTERVIEW QUESTIONS CORRELATION TO RESEARCH .....</b>	<b>129</b>

## LIST OF TABLES

Table 1. Financial Literacy Definitions and Measures .....	13
Table 2. Financial Literacy Key Terms .....	18
Table 3. Financial Education Pro & Cons .....	24
Table 4. Urban vs. Rural Differences .....	25
Table 5. Demographics of the sample.....	49
Table 6. Intraclass Correlations .....	51
Table 7. Relevancy ratings for the financial literacy questions .....	52
Table 8. Summary Statistics for Knowledge Assessments (n = 124).....	53
Table 9. Repeated measures by site analysis of variance on the pre-to-post gain in financial literacy.....	54
Table 10. Pretest and posttest percent correctly answered questions .....	55
Table 11. Repeated measures by site analyses of variance on the most relevant and least relevant gain in financial literacy.....	56
Table 12. Repeated measures by site analysis of covariance on the pre-to-post gain in financial literacy, covarying education, and income .....	58
Table 13. Repeated measures by site analysis of variance on the pre-to-post gain in confidence.....	59
Table 14. Repeated measures by site analysis of variance on most relevant and least relevant gain in confidence.....	60
Table 15. Participants Demographics (Interviews).....	72



## INTRODUCTION

Underserved communities in America have been misled and marginalized for decades. Due to pervasive poverty, individuals, minorities in particular, are experiencing an economic crisis (Brooks-Gunn & Duncan, 1997; Jargowsky, 2015). According to a report from The Urban Institute (2010), the U.S. child poverty rate has ranged between 15% and 23% over the past four decades. However, 37% of all children live in poverty at some point during their childhoods (Ratcliffe & McKernan, 2010). There is also significant racial disparity. As compared to white children, black children are substantially more likely to experience poverty and spend multiple years living in poverty. Being poor at birth strongly predicts future poverty status. Research has demonstrated that education and industrial employment opportunities are some of the solutions for lifting individuals out of poverty.

Financial literacy and educational programs are prospective factors that can assist with reducing racial disparities in the poverty gap. Can financial education and literacy programs assist underserved communities and individuals with their financial decision making? Will knowledge of relevant financial information assist communities that have been marginalized and underserved to become prudent with their finances? Are the environment and demographics of individuals the driving factors behind individuals' purchasing decisions? This report will examine some of these questions and contribute to behavioral economics research by explaining why some underserved individuals make poor financial decisions, and some do not.

This research is divided into three components. The first element is an introduction to financial literacy with some preliminary research. An objective of this study is to determine if financial training improves the financial literacy of individuals. Financial literacy programs can

be a major contributor to helping stop persistent poverty in the United States. On the one hand, financial literacy training can assist by empowering and advising individuals, and participants can apply the knowledge gained from financial training designed to develop independent and financially savvy citizens. On the other hand, financial literacy training has not always shown to be effective (Kiernan, (2013). This study reviews past research on financial literacy and financial decision making and presents a conceptual model and hypotheses.

The initial part of this research consists of two exploratory financial seminars conducted in underserved rural areas to test and validate the survey instruments. This research assisted in determining if the model and hypotheses could be tested. The sessions also assisted with developing valid and reliable instruments for future financial studies.

The second section consists of an empirical examination of the effect of a financial seminar on learning. This segment evaluates whether participation in a financial literacy seminar has a positive effect on financial knowledge. The research highlights the importance of studying financial literacy in underserved and disenfranchised communities. Additional financial literacy seminars will test the relevancy of the financial information in an urban metropolitan location (Fairfax Station, Virginia) and a rural southern location (Pell City, Alabama).

The last component of this study performs a comparison of perceptions of the challenges of financial literacy and financial decision making in designated underserved communities. The goal is to reveal the benefits that individuals in underserved areas can obtain by participating in financial literacy programs, and displays the ways this knowledge can assist them in their financial decision making process. This part of the research is of a qualitative nature. The studies use in-depth interviews with financial experts, community leaders, and underserved individuals.

In addition, exploratory surveys of those of modest means and those in underserved communities yield details regarding relevant financial topics important to the community. This research is multi-layered, considering aspects and influences of geography, by collecting data in the rural south, Alabama, North Carolina and urban areas such as Washington, DC, Saint Louis, Missouri, and Fairfax Station, Virginia.

In conclusion, the three components of this research are intended to reveal methods and expose barriers that may need to be removed from specific areas of society for some segments of underserved communities to become financially literate and independent of federal subsidies. This will help to inform policymakers, politicians, and employers of the potential of financially informed citizens, employees, and communities for improving the financial and well-being of organizations, rural areas, and cities.

## **ESSAY 1: INTRODUCTION TO FINANCIAL LITERACY IN UNDERSERVED COMMUNITIES**

The National Foundation for Credit Counseling (NFCC) financial literacy consumer survey (2007) established that many American consumers do not follow basic financial management practices (Financial Literacy, 2008). The transformation of financial markets and inadequate economic knowledge of mortgage customers over the last decade has made financial literacy an essential survival tool. While the recent financial crisis has many causes, it is undeniable that a major factor was the abundance of individuals not having knowledge about how money works. Sadly, far too many Americans do not have the basic financial skills necessary to develop and maintain a budget, to understand credit, to understand investment vehicles, or to take advantage of our banking system (President's Advisory Council on Financial Literacy, 2008). In 2009, the United States House of Representatives, Financial Services Committee, noted that increasing consumer financial literacy is a public policy objective to improve welfare through better decision making (Huston, 2010).

Alan Greenspan, economist and former chairperson of the Federal Reserve stated how “the number one problem in today’s generation and the economy is the lack of financial literacy” (Stansbury, 2014). According to Lusardi (2011b), “just as it was not possible to live in an industrialized society without print literacy, the ability to read and write, so it is not possible to live in today’s world without being financially literate. To fully participate in society today, financial literacy is critical” (p. 1). In contrast, Dr. Boyce Watkins (2015), from the Your Black World Network, believes corporate America and some legislatures do not want the underserved to be financially literate. His reasoning, among numerous additional advocates, is that

uninformed and uneducated persons are vulnerable targets to predatory businesses. If big corporations control the government, they can manage the economy and how consumers think.

Financial education has always been important to consumers in helping them budget, manage their earnings, save and invest efficiently, and avoid becoming victims of fraud (OECD, 2005). Developing financial literacy skills is an important way for people without much money to take more control of their lives. Although many people remain underserved, the federal government has taken significant steps to improve financial literacy in the United States. They have spent millions, maybe billions, of dollars towards financial literacy campaigns. In 2003, the U.S. Congress passed the Fair and Accurate Credit Transactions Act, which established the Federal Financial Literacy and Education Commission (Financial Literacy, 2015). Title V of the Act established the Commission to improve the financial literacy and education of persons in the United States through the development of a national strategy to promote financial literacy and education.

Financial literacy is an essential tool for anyone who wants to be able to succeed in today's society, make sound financial decisions, and ultimately be a good citizen. A lack of financial knowledge can contribute to poor financial decisions that harm individuals, families, and ultimately, entire communities for years to come. Evidence has revealed that informed and educated consumers and investors could assist the U. S. economy by helping individuals and families make sound financial decisions. Sound financial decision making increases the economic security of families and, in turn, contributes to the overall economic development of the community. Financial literacy is especially low and needed in underserved, impoverished communities in the U.S.

Poverty is a condition where people's basic needs for food, clothing, and shelter are not met. Income poverty is the condition of not having enough income to meet basic needs for food, clothing, and shelter (Brooks-Gunn & Duncan, 1997). The lack of financial literacy education in underserved communities is an essential factor in sustaining poverty within underserved groups. Previous research has identified correlations between family income and ethnicity with financial literacy, but the statistical significance of the relationship was not examined (Mandell, 2008a). Therefore, it appears that there is a gap in the literature on financial literacy, poverty, and financial decision making that addresses how the relevancy of financial information affects the quality of financial decisions, and how that relationship is affected by demographics such as income, age, and gender. This gap has motivated this current research. This report lays the groundwork for future studies to seek ways to close this gap.

This essay begins by briefly reviewing the literature on financial literacy, poverty, and the challenges of individuals in underserved communities. This offers an overview of the broader context for financial literacy in underserved communities. The following sections discuss the conceptual model and hypotheses related to financial literacy. I describe the research methods and how the data collection instruments were verified at financial literacy seminars in two underserved communities in Alabama and North Carolina. I conclude with an overview of research contributions, recommendations for improvements, and areas for future research.

## **Literature Review**

The literature review begins with a focus on past research on financial literacy. Numerous studies have been conducted, but this review is centered on research related to underserved and disenfranchised individuals. The literature on poverty and values are often produced in

substantially different intellectual worlds, worlds that involve various interlocutors, theories of behavior, styles of thought, and standards of evidence (Small, Harding, & Lamont, 2010). The academic literature on financial literacy adds an interesting framework that explores the effects that environments may have on financial literacy training and decision making. What is financial literacy? How does it relate to poverty in different geographical locations from an interdisciplinary perspective on financially underserved communities in the United States?

### *Review of Poverty*

Financial literacy and poverty have been studied from several different points of view. This study will contribute to the relevant literature by exploring how financial literacy is related to financial decision making, and the moderating effects of income and culture. The first challenge encountered in this research resides in the definition of poverty. Poverty is a condition where people's basic needs for food, clothing, and shelter are not met. Income poverty is the condition of not having enough income to meet basic needs for food, clothing, and shelter (Brooks-Gunn & Duncan, 1997). The federal government defines poverty from two different perspectives. The first viewpoint defines poverty as individuals whose income is approximate \$24,091 a year for a family of three (U.S. Census Bureau, 2014). The U.S. Census Bureau reports approximately 16% of the American population is in poverty, or approximately 45.3 million people and 20% of those in poverty are children. There are stark differences by race- According to a 2012 Henry J. Kaiser Foundation report, 13% of whites, compared to 35% of blacks and 33% of Hispanics, live in poverty (Bump, 2014). According to The United Nations Children's Fund (UNICEF), 23.1% of American children under the age of seventeen live in poverty, which makes the United States rank second out of thirty-five economically advanced

countries ranked in that category (United Nations Children's Fund, 2012). In another estimate, in the United States, 1 in 3 children lives in poverty (Ingraham, 2009).

The second perspective, from the Department of Health and Human Services (2015), defines poverty in terms of income thresholds that determine access to federal programs. This income level is approximate \$20,090 a year for a family of three. These guidelines are a simplification of the poverty thresholds used for administrative purposes, for instance, in determining financial eligibility for certain federal programs. The income thresholds vary by family size and composition to detect who is poor. If a family's total income is less than that family's threshold, then that family and every individual in it are considered poor. The income thresholds are adjusted annually according to the average Consumer Price Index (CPI). The poverty definition for the Bureau of the Census in this essay was used as a rough statistical measure to record changes in the number of persons or families in poverty (Office of Management and Budget's (OMB's) Directive 14(1978).

John Hope Bryant (2014) believes that the U.S. defines poverty too narrowly and would like to deepen this definition, to dilute, redefine, reimagine, and most importantly, to remove the shame of this definition and to replace it with a more hopeful label. Collen Asaad (2015) also believes financial literacy initiatives should focus not only on factual knowledge but on helping individuals achieve a healthy dose of confidence. The stigmas of poverty and lack of education are a constant state of being, making it necessary that society find a way to inspire and give people hope. Financial decision making is challenging for families that do not fit into the income levels narrowly defined as poverty by the U.S. government. Bryant recently stated, in which I am in total agreement that depending on your location individuals or families can make up \$50,000 annually and can still be considered poor, due to cost of living.



## *Poverty and Financial Decision Making*

Poverty and financial decision making are intertwined in a complex way. Individuals must not only possess the necessary knowledge but must also have the ability and confidence to apply their knowledge (Assad, 2015). Consumers seem to perceive the meaning of financial concepts differently due to cultural settings, financial constraints, and psychological orientation. Literature has suggested that building financial capability requires both the development of financial knowledge and the opportunity to develop healthy financial behaviors through access to financial products (Loke, Choi, & Libby, 2015). Some cultures and segments of society do not have access to these financial products and programs. Therefore, underserved communities are at a disadvantage compared to locations that have financial literacy programs and financial institutions readily available.

### *Underserved*

The term “underserved” has taken on multiple meanings depending on a given researcher’s discipline. Historically, the “underserved” have been defined as: (1) minority and women farmers and ranchers, farmworkers, and landowners and operators that have limited resources; (2) other minority groups including Native American and Alaska Natives; and (3) persons under the poverty level and individuals that have disabilities (U.S. Department of Agriculture, 2015).

I am taking an interdisciplinary perspective in defining this term. I examined how multiple disciplines have defined and measured the concept of underserved or disenfranchised groups. There are multiple definitions for the “underserved” used in the fields of health, education, and finance. The federal government defines “underserved” narrowly in terms of

designated professional health shortage areas or vulnerable populations. According to the Bureau of Primary Health Care (BPHC) (2005), these designations traditionally include hospitals with low-income utilization rates greater than 25%, public health departments, federally funded clinics, neighborhood health centers, and homeless shelters that provide services for a high number of urban and rural poor persons, ethnic minorities, immigrants, elderly individuals, homeless persons, and women and children who need access to primary care (U.S. Department of Health and Human Services, 2000, 2004). According to U.S. Department of Agriculture (2015), “underserved” is defined as individuals, groups, populations, or communities that USDA Agencies have not effectively protected, supported, or promoted in the delivery of programs and services on a fair and equitable basis.

Some researchers have attempted to define the term underserved more broadly. Hall, Stevens, and Meleis (1994) conceptualized underserved populations through the lens of marginalization, which refers to the peripheralization of individuals and groups from a dominant central majority. Within this framework, underserved groups are discussed in terms of an uneven balance of power.

### *Health and Underserved*

The National Centers of Excellence in Women’s Health (CoEs) designated by the Office on Women’s Health (OWH) of the Department of Health and Human Services (DHHS) defines underserved populations by using a seven-point definition utilized in the Index for Primary Care Shortage (IPCS), which categorizes underserved populations based on characteristics such as race, ethnicity, geography, and health outcomes. The IPCS variables used to define underserved are: (1) the population to primary care practitioner ratio; (2) the percentage of the population with incomes 200% below the poverty line; (3) the infant mortality or low birth rate; (4) the percentage of racial minorities; (5) the percentage of Hispanics; (6) the percentage of the linguistically isolated; and (7) the areas of low population density (Weitz, Freund, & Wright, 2001).

### *Education and Underserved*

In the context of education, one study defined an “underserved student” as a student from an underserved background who was not given adequate resources compared to their counterparts (Brown-Robertson, Ntembe, & Tawah, 2015). Their report also categorizes first generation college students as underserved asserting that first-generation college students are likely to enter college with less academic preparation and possess limited access to information about the college experience, either first hand, or from relatives (Ibid).

### *Financially Underserved, Unbanked, and Underbanked*

The Center for Financial Services Innovation (CFSI) and Core Innovation Capital, with the financial sponsorship and strategic input from Morgan Stanley, provides an annual report to review the underserved market size. The report describes underserved consumers as individuals

that are unbanked or underbanked, have subprime credit scores or are unscorable, and people that have low-to-moderate or volatile income (Center for Financial Services Innovation, 2014). The CFSI report also uncovered that some people are financially unhealthy but not necessarily underserved.

According to the United States Postal Service (2014), financially underserved individuals primarily consist of two main groups: (1) the unbanked, which have no checking or savings account; and (2) the underbanked, which have a bank account but also used at least one non-bank financial service during the past year. Non-bank financial services consist of payment services, credit services, and products to encourage savings. Underserved groups within the United States vary across racial and ethnic lines. A study by the Federal Deposit Insurance Corporation (FDIC) (2011) determined that African Americans, Hispanics, and Native Americans tend to be more unbanked and underserved than other ethnic groups as a whole. According to a study by KPMG (2011), this underserved market represents more than 88 million individuals and nearly \$1.3 trillion in wages. The unbanked is approximately 12% of the population, about 15% do not have a checking account, and 28% do not have a savings account, a money market account, or Certificates of Deposit (Lusardi, 2011a). Underserved communities will need additional assistance, close to one-third (31%) of those with low income are unbanked, and as many as 28% of African Americans and 30% of Hispanics are unbanked.

In this report, “underserved” will be defined taking into account geographical differences using the definitions set by the United States Census Bureau (2014): (1) Rural areas encompass all population, housing, and territory not included within an urban area; and (2) Urban areas are considered the inner city plus built-up environments, irrespective of local body administrative boundaries. Thus, underserved populations are defined by more than their demographic

characteristics, socioeconomic factors, or health resource availability. As indicated by the work of Lamet (2004), even individuals with ample financial resources may be underserved with respect to healthcare. Other populations may be underserved because individuals have difficulty accessing financial services.

The Federal Credit Union Act defines an underserved area as a local community, neighborhood, or rural district that is an “investment area” as defined in Section 103(16) of the Community Development Banking and Financial Institutions Act of 1994. The Act considers an area underserved: (1) when the percentage of population living in poverty is at least 20%; (2) where the median family income in the metropolitan area is at or below 80% of that Metropolitan Area’s median family income, or the national metropolitan area median family income, whichever is greater; (3) when located outside of the metropolitan area where the median family income is at or below 80% of the statewide non-metropolitan area median family income or the national non-metropolitan area median family income, whichever is greater; (4) where the unemployment rate is at least 1.5 times the national average; (5) where the percentage of inhabited distressed housing (as indicated by the lack of complete plumbing and occupancy of more than one person per room) is at least 20%; or (6) when located outside of a Metropolitan Area with a county population loss between 1980 and 1990 of at least 10% (NCUA Letter, n.d.).

This report includes the above populations in its definition for underserved individuals. More specifically, this report defines underserved rural individuals as people who live in communities in the United States who might live far from population centers and have to travel long distances to reach certain facilities, such as hospitals, schools, and day care centers. The National Credit Union Association (NCUA) and the Department of Health and Human Services designated these areas as low-income and medically underserved areas.

Underserved individuals in urban areas will be defined as historically disenfranchised people living in moderate conditions or the inner city but have difficulty understanding financial resources (funding sources).

### *Financial Literacy*

Dr. Sandra Huston's (2010) research, specifically "Measuring Financial Literacy," noted the lack of universally accepted meanings for the terms "financial literacy" in the financial education community creates major barriers. Huston (2010) determines that financial literacy is a component of human capital that can be used in financial activities to increase expected lifetime utility from consumption (i.e., behaviors that enhance financial well-being).

Another criticism of financial literacy research is that it has been conducted with widely varying conceptualizations, dimensions, and measures of the concept. Prior research thus far has not used standard methods for deriving reliable, valid, and unidimensional measures (Knoll & Houts, 2012), creating a need for more reliable and valid measures of financial literacy. Fernandes, Lynch, and Netemeyer (2013) define financial literacy as "the knowledge of basic concepts of personal finance with respect to borrowing/debt, and saving/investment that leads to better lifetime financial decision-making" (p. 75).

One of the most fundamental definitions of financial literacy relates to a person's competency for managing money (Remund, 2010). Remund's research breaks down financial literacy definitions into five categories: (1) knowledge of financial concepts; (2) ability to communicate about financial concepts; (3) aptitude in managing personal finances; (4) skill in making appropriate financial decisions; and (5) confidence in planning effectively for future financial need. His research defines financial literacy as a measure of the degree to which one

understands fundamental financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision making and sound, long-range financial planning while mindful of life events and changing economic conditions (Remund, 2010). Similarly, Mandell (2008a) describes financial literacy as the ability of consumers to make financial decisions in their best short-and long-term interests.

The U.S. Financial Literacy and Education Commission (2007) and Jump\$tart Coalition (2007) have similar definitions. The Commission defines financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being (security). Jump\$tart defines financial literacy as the capacity to understand and analyze financial options, planning for the future, and responding appropriately to these events (Taft, Hosein, Mehrizi, & Roshan, 2013). The research has determined that most financial literacy definitions relate closely to ability and knowledge. The literature supports the notion that individuals must have the ability and knowledge to understand financial concepts. Therefore, this report coincides with the definition adopted by the President's Advisory Council on Financial Literacy in 2008. For this report, I define financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being. A list of various definitions and measures of financial literacy that assist in operationalizing the definitions for this research is presented in Table 1.

<b>Literature Review Summary Table</b>			
<b>Financial Literacy Definitions and Measures</b>			
<b>Author/Date</b>	<b>Financial Literacy Definitions</b>	<b>Financial Literacy Measures</b>	<b>Effects of Financial Literacy</b>
Asaad (2015)	Possessing the necessary knowledge and also have the ability and confidence to apply their knowledge	Two sources: the <u>National Financial Capability Study (FINRA 2009)</u> with three basic financial knowledge questions about risk, interest and inflation; and the <u>German SAVE Study (SAVE 2009)</u> with three brain-teasers, or logic questions.	Individuals with both high actual financial knowledge and high perceived financial knowledge engage in 'good' financial behaviors compared to individuals with both low actual and perceived knowledge. Additionally, when perceived knowledge is high and actual knowledge is low, individuals are more likely to take financial risks.
Fernandes, Lynch & Netemeyer (2013)	The knowledge of basic concepts of personal finance with respect to borrowing/debt, and saving/investment that leads to better lifetime financial decision-making	They conduct three empirical studies, and found that the partial effects of financial literacy diminish dramatically when one controls for psychological traits that have been omitted in prior research or when one uses an instrument for financial literacy to control for omitted variables. They conduct a meta-analysis of the relationship of financial literacy and of financial education to financial behaviors in 168 papers covering 201 prior studies. They identified studies by a computerized bibliographic search, included only the paper with the most inclusive sample. They included pretest posttest studies only if pre and post were separated by at least two weeks.	Financial education interventions have statistically significant but miniscule effects. Correlational studies that measure financial literacy find stronger associations with financial behaviors. The findings that interventions to improve financial literacy explain only 0.1% of the variance in financial behaviors studied, with weaker effects in low-income samples. They also predicted that a valid measure of financial literacy would be negatively correlated with being a spendthrift.
Hogarth (2006)	Financially educated individuals can manage their finances by doing things like paying their bills on time, having good credit, and having the means to save and invest	This paper provides a snapshot of the current state of financial education in the U.S. as it relates to community and economic development. Data from Opportunities Credit Union (OCU) members were used in a <u>case study and survey</u> regarding their involvement with the credit union – for example, which services they used (savings, transactions, lending, and a variety of educational services) and which of these services they found to be first, second, and third “most important.”	This case study hint at the potential relationships between financial education and community involvement and give us some hope that financial education programs really are making a difference in communities
Huston, S.J. (2010).	A component of human capital that can be used in financial activities to increase expected lifetime utility from consumption (i.e., behaviors that enhance financial well-being).	To measure the human capital specific to personal finance, this study uses the conceptual framework, financial literacy assessment instrument and scoring grid developed by the Financial Literacy Assessment Project at Texas Tech University. This study examines the impact of financial literacy level on the cost of borrowing regarding credit cards and mortgages using the assessment guidelines proposed by Huston (2010a) and uses data from the <u>Consumer Finance Monthly (CFM) survey</u> to calculate an individual's financial literacy level.	Results from this study provide evidence that human capital specific to personal finance, financial literacy, is an important predictor of paying less to borrow with respect to credit cards and mortgage loans. Those who are financially literate are about twice as likely to pay below average interest rates to transfer resources from future periods into the present for consumption compared with those who are not financially literate.
Mandell, L. (2008a)	The ability of consumers to make financial decisions in their best short-and long-term interests.	31 question financial literacy test	College courses in personal finance, economics, accounting or finance seem to have little impact on financial literacy and none on financial behavior.
President's Advisory Council on Financial Literacy in 2008	The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being.	NA	NA
Remund (2010)	A measure of the degree to which one understands fundamental financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision making and sound, long-range financial planning while mindful of life events and changing economic conditions	The purpose of this study was to explicate the concept of financial literacy by analyzing the many ways in which it has been interpreted and measured in research since 2000. More than one hundred resources were examined, including academic and professional journal articles; government and industry resource materials; The analysis draws from literature already cited in this study, along with additional research reports that discuss how to measure financial literacy without ever actually defining the concept.	Through analysis of existing research, there is seemingly no common ground when it comes to operationalizing, or measuring, financial literacy in research studies and education programs. This study has identified a crucial need for researchers to employ clear, consistent criteria when defining and measuring financial literacy. The development and validation of a benchmark survey for all adults and consist definitions.
The U.S. Financial Literacy and Education Commission (2007); JumpStart Coalition (2007)	The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being (security)	NA	NA
Taft, Hosein, Mehrizi & Roshan (2013)	The capacity to understand and analyze financial options, planning for the future, and responding appropriately to the events	This study tries to evaluate the relation between financial literacy, financial wellbeing and financial concerns. For this purpose, a questionnaire was designed and distributed using random sampling among people. Data was analyzed using correlation test, Independent two-sample test based on the T distribution and regression.	Age and education are positively correlated with financial literacy and financial wellbeing. Married people and men are more financially literate. Higher financial literacy leads to greater financial well-being and less financial concerns. Finally, financial wellbeing leads to less financial concern.

**Table 1: Financial Literacy Definitions and Measures**



Therefore, to examine financial literacy in the broader context of the underserved, the dissertation goes beyond the narrow income range used by Federal agencies to define poverty. The U.S. median household income in 2014 was \$54,000, and income and cost of living vary significantly across states and counties (U.S. Census Bureau, 2014). Geographic differences are important, as incomes and the cost of living are much higher in many northern states than in many southern states. For the purposes of this dissertation research, a medium range of income (income of \$40,000 and below) is used to define underserved or low-income individuals.

The geographic environment one lives in can have a substantial effect on employment opportunities for individuals, which in turn impacts their financial decisions. According to interviews with Chicago areas employers, Kirschenman and Neckerman (1991) find the perception of a prospective employee's ability to perform a job has been based on race, class and even geographic location. Some economic researchers have stated that work is one of the best mechanisms to lifting people out of poverty so that they can make better financial decisions. However, every citizen is not allowed to take the full advantage of a healthy and changing economy due to prejudices and the need for quality education.

There are some other terms related to financial literacy. The following sections explore the terms of financial knowledge, financial capability, financial education, and financial relevance. Understanding these terms are essential to the study of financial literacy in underserved populations.

### *Financial Knowledge*

There are several operating definitions for financial knowledge. Financial knowledge has been identified as understanding the principles and terminology needed for successful

management of personal financial issues (Garman & Forgue, 2000). Jacob, Hudson, and Bush (2000) have considered personal financial knowledge to be concepts of personal financial management skills and information. Finally, Cathy Bowen (2002) defines financial knowledge as understanding key financial terms and concepts needed to function daily in American society. The lack of financial knowledge and understanding at the individual level translates into significant problems at the community and national levels. The effects of the 2008 recession on people who did not comprehend the risks involved with subprime mortgage products and who did not fully understand compound interest principles and the time value of money were especially affected (National Financial Capability Strategy, 2015).

### *Financial Capability*

Financial capability refers to both knowledge and ability; it includes the financial knowledge needed for financial sound behavior, as well as the capacity to access financial products and undertake desired financial behavior (Johnson & Sherraden, 2007; Sherraden, 2013). Financial capability is frequently referred to as a broader set of financial outcomes. According to Executive Order 13530 that created the President's Advisory Council on Financial Capability, financial capability is the capacity, based on knowledge, skills, and access, to manage financial resources effectively (Lachance, 2014). This ability is developed when individuals have appropriate access to and understanding of financial products, services, and concepts. The goal of financial capability is to empower individuals to make informed choices, avoid pitfalls, know where to go for help, and take other actions to improve their present and long-term financial well-being.

## *Financial Education*

A factor that is often overlooked when assessing the outcomes and impacts of financial education is the delivery system for financial education. According to Sebstad, Cohen, and Stack (2006), the when, where, and how; of financial education, delivered to clients has significant implications for its effectiveness in achieving outcomes and impacts. The level of exposure that individuals have with financial education programs and how much opportunity one has to experience financial products is an important component to consider.

According to the Consumer Financial Protection Bureau (2015), when laying the groundwork for support programs, the most efficient and enduring movements are built on firm foundations. Designing programs that promote goal setting and saving, that build confidence, personal responsibilities, and accountability, are a few noteworthy practices that could assist in developing a base for such a strategy. Financial and poverty programs should be designed to enforce these tenets and the need to understand that we are in control of our destiny. Research has suggested that despite having financial knowledge and access to financial products, many people still struggle to implement positive financial behaviors (Loke, Choi, & Libby, 2015). The field of behavioral economics alludes to these findings and suggests certain design principles, such as automatic enrollment in financial programs and the establishment of defaults, can influence the adoption of desired behaviors (Thaler & Sustein, 2009).

There are assumptions that the spending patterns of poor individuals and financial behaviors are aligned with their earnings. Their funds are allocated in the most efficient way for them to survive, and one can assume that individuals or groups who are considered less fortunate would only purchase items needed to survive on a daily basis. We could also assume that

underserved communities and poor people squander their resources and these behaviors would not change if more resources were allotted or financial education provided. Ted K. Bradshaw's (2006) first theory reinforced the notion that individual deficiencies cause this concept. Some conservative scholars blame persons in poverty for creating their problems and argue that with harder work and better choices the poor could have avoided (and now can remedy) their problems. This theory would assume that only poor and underserved individuals have this attitude toward financial accountability.

The Merriam-Webster dictionary distinguishes between “educated” and “literate” by distinguishing how education involves training or practice while being literate refers to one who can do something, like read or write. Financial education, on the other hand, is the process by which people improve their understanding of financial products, services, and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help, and take other actions to improve their present and long-term financial well-being (OECD, 2005). A representative list of key financial literacy terms that assist in operationalizing some of the definitions for this research is presented in Table 2.

<b>Key Terms</b>	<b>Authors</b>	<b>Definitions Used in Articles</b>
<b>Financial Capacity</b>	Johnson, E. and Sherraden, M. (2007)	Requires knowledge and competencies, ability to act on that knowledge, and opportunity to act.
	Sherraden, M.S. (2013)	Combines people's ability to act and their opportunity to act in their best financial interests
	Huang, J.Y., & Sheridan, M. (2013)	A combination of financial literacy and financial access. To be financially capable, individuals must have financial knowledge and skills as well as access to appropriate financial products and services.
<b>Financial Literacy</b>	Huston, S.J. (2010)	How well an individual can understand and use personal finance-related information.
	Taft, M., Hosein, Z., Mehrizi, S., & Roshan, A. (2013)	The ability to understand and analyze financial options, planning for the future, and responding appropriately to the events.
	Remund, D.L. (2010)	The degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions.
	Mandell, L. (2008)	The ability of consumers to make financial decisions in their best short- and long-term interests.
	Jump\$start Coalition (2007)	The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial security.
	U.S. Financial Literacy and Education Commission (2007)	The ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being.
	<b>Financial Knowledge</b>	Garman, E.T., & Fogue, R.E. (2000)
Jacob, K., Hudson, S., & Bush, M. (2000)		Concepts of personal financial management skills and information.
<b>Poverty</b>	U.S. Census Bureau (2014)	Those who make less than \$24,091 a year for a family of three.
	Department of Health and Human Services (2015)	Those who make less than \$20,090 a year for a family of three.

**Table 2: Financial Literacy Key Terms**

## *Financial Relevance*

Lusardi and Mitchell (2011a), have conducted numerous studies on the relevance of financial literacy around the world. One key factor is defining and measuring relevant financial literacy training. Relevancy in this manner is considered something that is useful to individuals in their day to day financial decision making. Various dictionaries have defined the term as having: (1) a relation to the matter at hand; (2) an emphasis on practical, social applicability; or (3) the ability (of an information retrieval system) to retrieve material that satisfies the needs of the user. It is difficult in determining what is relevant for individuals due to their culture and environment, but attempting to understand how people process economic information and make informed decisions about household finances is an overwhelming, but necessary task.

In the context of seeking to measure the relevance of financial literacy, the University of Michigan Health and Retirement Study (HRS) has a great plan with four principles that could be adopted:

(1) Simplicity. Measure basic financial concepts, akin to the notions of the ABC's of finance.

(2) Relevance. Questions had to relate to concepts pertinent to people's day-to-day financial decisions over the life cycle. Moreover, they had to capture general rather than context-specific ideas.

(3) Brevity. Few representative surveys can devote much time to financial literacy topics and so the number of questions had to be kept to a minimum to secure widespread adoption.

(4) Capacity to differentiate. Questions that can differentiate between financial knowledge levels, so as to compare people in terms of their scores on a common set of questions (Lusardi & Mitchell, 2011).

Research has shown that financially educated individuals can manage their finances by doing things like paying their bills on time, having good credit, and having the means to save and invest (Hogarth, 2006). The literature establishes that education alone probably will not completely make individuals financially literate or bring individuals totally out of poverty, but financial education is a critical component to resolving this dilemma. Cultural concerns and the environment must also be factored in. In the next section, the focus is on framing a model that shows an explicit linkage between financial literacy, underserved individuals, poverty, and decision making.

### **Conceptual Model and Hypotheses**

Previous definitions of financial literacy have expressed that to make large financial decisions; people must not only possess the necessary knowledge but must also have the ability and confidence to apply their knowledge (Asaad, 2015). Obtaining this knowledge goes back to the basic tenets of learning: reading, writing, and comprehension. In other words, literacy. The mathematical and economic skills of people should also be addressed. The importance of education should not be understated, as many studies have shown there is a strong correlation between wealth and education, even after controlling for permanent income and other demographic characteristics that can account for preferences or economic circumstances (Browning & Lusardi, 1996).

This exploration has influenced the model that will hopefully assist underserved individuals, and marginalized communities to become financially literate and productive citizens. To help release individuals and communities from the grasp of poverty, we must get to the root causes. Financial illiteracy is only one problem that must be fixed, but still a critical component that must be developed in the minds of the underserved if we want to achieve long-term progress. To prepare individuals, we must first ensure underserved people and communities have the opportunity to participate. Low-income and underserved individuals and communities normally do not have the facilities, personnel, and settings to assist them in obtaining these skills. Programs should be scheduled around times that best fit the schedules of the communities they are serving. The training should be relevant and made accessible to residents within a reasonable and safe commuting distance. There has been some research on the relevance of student perceptions of financial literacy and its relevance to practice, but the focus was more on social behaviors such as financial stress and strain. Thus far this research has not collected meaningful data linking consumer decision making and relevancy of financial literacy education.

Lauren E. Willis (2008), is an advocate of an opinion that is in contradiction of financial literacy good will. Her prior work claims to demonstrate that the belief in the effectiveness of financial literacy education lacks empirical support. She believes that in the current markets financial literacy is not sufficient for sound financial decision making. Heuristics, biases, and emotional coping mechanisms that at times interfere with welfare-enhancing personal-finance behaviors are unlikely to be eradicated through education (Willis, 2008). She believes that since financial services firms enjoy an advantage in resources over educators, this puts them in a better position to reach out to consumers. Firms can more effectively capitalize on decision making biases than can educators who seek to train consumers to avoid natural decision biases.



Willis believes financial education appears to increase confidence without improving ability, leading to worse decisions. She also thinks people are financially illiterate not because they are stupid, but because they have better things to do with their time. The hours of study they would need to invest to attempt to reach literacy are unlikely to generate positive returns. Education provided by nonprofits and the government has no chance against the marketing and sales efforts of the financial-services industry. The odds are that industry, and not educators, reaches consumers when they are in teachable, vulnerable moments.

The reality, according to Lauren Willis (2011), is that effective financial education would need to be extensive, intensive, frequent, mandatory, and provided at the point of decision making, in a one-on-one setting, with the content personalized for each consumer. Compulsory financial education would mean that all citizens should gain access to some form of financial literacy training. The present state of financial education is usually provided on a voluntary basis and may not be readily accessible and available to poor and underserved communities. Financial institutions may be difficult to get to, and, therefore, entail a higher cost of going to one.

Other researchers do seem to agree that personal finance classes can increase confidence, but without improving ability. This could lead to worse financial decisions. However, even if financial education can sometimes be a waste of time and money, that is not sufficient reason to stop trying to improve and pursue financial literacy education. Esther Duflo and Emmanuel Saez (2003) conducted research on financial seminars and endorsed the belief that financial education has an effect on behavior. Their study revealed retirement seminars had a positive impact on participation in retirement plans. Other critics agree that the seminars had a positive effect on wealth, but emphasize that it was mainly for those who are less privileged and educated.

This challenges the theory that underserved individuals are less concerned about their financial welfare. Earlier discoveries lead to the question: Does having knowledge of financial education assist underserved and poor individuals in becoming economically prudent citizens over time? Numerous studies have been conducted to attempt to determine if providing training in financial education is worth the cost. Critics on both sides of the aisle have made practical proposals for and against mandatory financial education in high schools. A few arguments against mandatory financial education, despite the benefits, are; regulations limit choice and they may infringe on an individual's matters (to be genuinely effective, programs must be tailored to a person's situation, requiring the disclosure of private information), and may require psychological monitoring and testing.

In 2011, The World Bank conducted a study which found that financial literacy programming leads to significant improvements in the awareness to financial products and services available to individuals, as well as their familiarity with the details of such products and services. Specifically, people who received financial literacy training are 5% more likely to know the concept of a household budget, 17% more likely to know minimum bank account opening requirements, and 20% more likely to understand unproductive loans (Carpena, Cole, Shapiro, & Zia, 2011). These findings suggested that the inclusion of relevant information in financial literacy education programs leads individuals to become more knowledgeable about financial concepts. The expectation is that improved financial knowledge, skills, and attitudes will contribute to better financial decision making and improvements in financial behavior. Table 3 refers to a couple of cases for and against financial education. Table 4 address some concerns other researchers have with location and environment by presenting a few studies in urban and rural settings discussing financial literacy.

<b>Pros and Cons of Financial Education Financial Literacy comparison</b>		
<b>Author/Date</b>	<b>Reasoning for or against personal finance education</b>	<b>Relevant findings/similarities</b>
Kiernan (2013)	Dr. Shawn A. Cole, and Professor Lauren Willis, argument centers around research which indicates that little or no correlation exists between the type of state-mandated personal finance education programs we've seen pop up across the country in the last 15 years or so and improved consumer performance later in life. The research in question stems from a pair of "working papers" that Cole co-authored with Anna Paulson – an economist with the Federal Reserve Bank of Boston, and Gauri Kartini Shastri – an assistant professor of economics at Wellesley College.	They found that while increased mathematics requirements and additional years of general education do improve ultimate financial performance, personal finance-specific content has no quantifiable impact. Instead, they argue that overall cognitive development is the most important byproduct of continued education. Cole and Shastri aren't against financial literacy programs per se, but rather that they find fault with the practice of blindly funding them in the absence of evidence that they're truly helpful.
Willis (2008)	Willis believes financial education appears to increase confidence without improving ability, leading to worse decisions. She also thinks people are financially illiterate not because they are stupid, but because they have better things to do with their time. The hours of study they would need to invest to attempt to reach literacy are unlikely to generate positive returns. The waste of time and money alone is reason enough not to pursue financial-literacy education. Against the marketing and sales efforts of the financial-services industry, education provided by nonprofits and the government has no chance. The odds are that industry, and not educators, reaches consumers when they are in teachable, vulnerable moments.	Willis findings believes a little bit of knowledge is a dangerous thing. Confidence is not a measure of literacy; some of the least knowledgeable consumers appear to be the most confident. Research shows that consumers with high financial-literacy exam scores generally correctly perceive their knowledge levels as high, but those with average and low scores are significantly more confident in their own knowledge than they should be. When higher literacy is associated with worse outcomes, overconfidence is a likely mediator.
Reich, & Berman (2015)	These researchers believes financial literacy courses have been portrayed as being helpful, but it is important to note that the research evaluating their effectiveness has been methodologically limited. One limitation in previous attempts to evaluate these courses is that many of them rely on measures that do not clearly indicate the success of the intervention for increasing financial literacy. Instead, such studies have focused on global impressions of participants such as satisfaction, self-confidence, attitudes, subjective sense of improvement, and self-reported measures of intended changes in financial behavior.	The aim of this study was to use an experimental design to evaluate the effectiveness of a financial literacy course for low income individuals in a nonprofit residential program. This study suggests a course intervention can be effective. Participants reporting low levels of positive behaviors prior to the course did not show improvement in these behaviors after taking the course, whereas their counterparts reporting high precourse positive behaviors reported significantly greater positive behavior as a result of the course. Overall, these findings are consistent with the larger literature showing that financial education can be effective in improving financial knowledge and positive behaviors
Carpena, Cole, Shapiro, & Zia (2011)	This group of researchers believes there is very little rigorous evidence on the impact of financial education. While some rigorous evaluations of financial literacy programs are now underway, the focus seems to be mostly on measuring end outcomes such as behavior change or financial product take-up, and not much on the mechanism of impact – i.e. why and how do financial literacy programs impact financial behavior? This report studies the experimental impact of financial literacy on three distinct dimensions of financial knowledge. It focus on the intermediary impacts of a five-week comprehensive video-based financial education program in India with modules on savings, credit, insurance and budgeting. They specifically measure the effect on three distinct dimensions of financial knowledge: (1) numeracy skills (e.g. computing interest rates), (2) basic financial awareness (e.g. bank account opening requirements), and (3) attitudes towards financial decisions (e.g. belief in insurance products).	The analysis finds that using a randomized experiment financial literacy does not immediately enable individuals to discern costs and rewards that require high numeracy skills, but it does significantly improve basic awareness of financial choices and attitudes toward financial decisions. Monetary incentives do not induce better performance, suggesting cognitive constraints rather than lack of attention are a key barrier to improving financial knowledge. These results illuminate the strengths and limitations of financial literacy training, which can inform the design and anticipated effects of such programs.

**Table 3: Financial Education Pro & Cons**

<b>Rural vs Urban Differences</b>		
<b>Author and Date</b>	<b>Target Audience</b>	<b>Rural/Urban differences</b>
Lusardi & Mitchell (2011a)	Italy and Russia	There are large geographic differences in financial literacy. Financial literacy in Italy is higher in the Northern and Central regions than the Southern regions. People in urban areas in Russia tend to be more financially literate than those living in rural areas.
Valentine & Khayum (2005)	High school seniors in urban and rural high schools in Southwestern Indiana and a personal finance literacy quiz that covered questions on six specific topics — credit cards, checking and savings accounts, automobile insurance, housing rental, food purchases, and car purchases.	No meaningful differences. The average score on a personal finance quiz was 51% for the entire sample of 312 students, 51% for the students in the urban schools, and 50% for the students in the rural schools.
Lachance (2014)	The survey does not target any particular respondent within a household. The primary dataset for this analysis is the state-by-state version of the NFCS sponsored by the Financial Regulatory Authority’s (FINRA) Investor Education Foundation. The survey uses nonprobability quota sampling to draw respondents from online panels, which consist of millions of individuals who receive incentives to participate in surveys.	The results suggest that individuals do not operate in a vacuum and are affected by their environment when it comes to financial behavior. One implication of this study is that those without financially knowledgeable resources in their entourage face a steeper challenge in acquiring financial literacy. The Social Capital Community Benchmark Survey (SCCBS) data indicates that those in less-educated neighborhoods have a much lower proportion of college-educated group members, which in turn means less “financial social capital.” It can actually be shown with the SCCBS data that living in a better-educated zip code translates into having better educated social relationships.
Ali, Anderson, McRae, & Ramsay (2016)	International: Australian secondary school students. In this paper we identify the gap between urban and rural survey participants in respect of their financial literacy, and locate the contrasting knowledge levels in a setting that includes socio-economic status (SES) and language background.	Financial literacy is a life skill. Individual demographics do impact on the levels of financial literacy that a person attains over their life. Large cohort studies of young Australians found that SES and geography are two key factors that determine educational outcomes. Compared with their urban counterparts, rural and regional students are at a disadvantage. It is therefore not surprising that financial literacy, a skill that is impacted by demographic factors, is shown in this study to have a relationship to where students live and go to school. The findings of this study found that financial literacy of rural and regional students was lower than urban students.

**Table 4: Urban vs. Rural Differences**

The starting point is the relationship between financial education and financial knowledge. Although in past research some have argued that financial education and financial literacy programs are ineffective (Willis, 2008), I expect financial literacy programs to improve financial knowledge, especially on aspects that are particularly relevant. Therefore, I hypothesize:

***H1: Participation in a financial literacy program has a positive effect on financial knowledge.***

***H2: The more relevant the financial knowledge taught in financial literacy programs, the more the positive effects of participation in the program on financial knowledge increase.***

In some cultures, financial matters are not discussed with the family. The environment one grows up in can have a lasting effect on a person's financial decision making. In their study of knowledge versus long-term financial planning, Alhenawi and Elkhal (2013) revealed that cultural and family values show a strong positive relationship between financial knowledge and financial planning in European households. For example, households in the Netherlands are more likely to watch financial news and participate in the stock market, while financial well-being is determined more by gender, marital status, and level of general education in Italian families (Monticone, 2010).

All people need financial education to become financially literate, but the poor and underserved have less opportunity to learn and are targeted more often. Ted K. Bradshaw's (2005) theory of the culture of poverty asserts that poverty came about over generations passing down a set of beliefs, values, and skills to family and friends. In contrast, education and individual preferences have proven that people can come from the worst environments and become financially secure and successful. With respect to economic attitudes, researchers have

also demonstrated that religion (culture) is a major factor in economic/financial beliefs and preferences. A study by Luc Rennboog and Christophe Spaenjers (2012) concludes that Catholics and Protestants in the Netherlands consider themselves more trusting, care more about leaving money to their children, and have longer planning horizons than non-religious households. This implies that Catholics attach more importance to thrift and are relatively averse to taking risks while Protestants are less likely to think that their life is determined by their actions and have a relatively greater sense of individual responsibility. This concept demonstrates that the people and the environment that a person spends the most time with will cause that individual to behave and think in a particular manner, financially and personally. Individuals learn by association and experience. If individuals never have an opportunity to conduct financial transactions at a financial institution, were associated with someone who was making these transactions, or was educated on the process, how would they recognize the benefits of credit and financial institutions?

Research has revealed there are several other moderators that influence decision making. According to Dietrich (2010), these factors include past experiences, a variety of cognitive biases, an escalation of commitment and sunk outcomes, individual differences, including age and socioeconomic status, and a belief in personal relevance. Past experiences have been known to impact future decision making (Juliussen, Karlsson, & Garling, 2005). When something positive results from a previous decision, people are more likely to decide in a similar way, given a similar situation. On the other hand, people tend to avoid repeating past mistakes (Sagi & Friedland, 2007). This is a strong point since making future decisions based on past experiences with negative outcomes are not necessarily the best decisions. In contrast, others find that in financial decision making, highly successful people do not make investment decisions based on

past sunk outcomes, but rather by examining choices with no regard for past experiences. This approach conflicts with what one may expect (Juliussen et al., 2005), which is why financial decisions are complex and require a multi-step approach.

In some academic conversations, researchers have contended that an individual's attitude toward money is mostly independent of a person's income (Shih & Ke, 2014). Other studies determined that income levels are a factor. One example (Furnham, 1984; Lim, Teo, & Loo, 2003) suggested that people in lower income groups who have experienced financial hardship are more obsessed with money and view money as a source of power. In summary, an individual's income level and education level should have a significant impact on people's economic and financial decision-making processes.

In a financially underserved community, the available educational system is often of poor quality. Property taxes represent the largest share of local school funding, and the quality of instruction will vary due to the economic wealth of their surroundings. If the economic environment is not progressing or is in an underserved neighborhood, the educational opportunity for employment will also suffer. Therefore, the environment impacts individuals attitudes toward money and impacts financial behavior. The actual location or place someone grows up does matter, and it affects decision making abilities and how a person thinks. Research has shown that communities that are distressed undermine the outcomes and trajectories of individuals. Unfortunately, all things are not equal. Young adults from high-poverty neighborhoods and preschoolers from low-income families, have been less successful and have exhibited more aggression when interacting with others (Kupersmidt, Griesler, DeRosier, Patterson, & Davis, 1995; Pastor, 2010).

Individuals vary in their education levels and income, and in their access to community services. Financial literacy programs and financial education have the potential to benefit individuals across a wide range of backgrounds. Reaching those at the lower range of education and income is the biggest challenge. Even if the most disadvantaged members are targeted, more privileged individuals are often more likely to participate in voluntary programs and seminars. Recognizing this heterogeneity within geographically defined underserved communities is important. I expect that the demographic characteristics of the individuals involved in a financial literacy program affect the knowledge attained from a program. In particular, I expect educational level and income level to matter. In testing this relationship, I also see the need to control for other individual characteristics such as age, gender, and marital status. Therefore, I hypothesize:

***H3: Individual characteristics moderate the effect of learning in a financial literacy program on financial knowledge.***

***H3a: The higher the individual's income, the more positive the effect of participation in a financial literacy program on financial knowledge.***

***H3b: The higher the individual's educational level, the more positive the effect of participation in a financial program on financial knowledge.***

The focus of this study is reflected in “Conceptual Model” (Figure 1). The next segment of this report will discuss research methodology.



# Conceptual Model of Financial Literacy

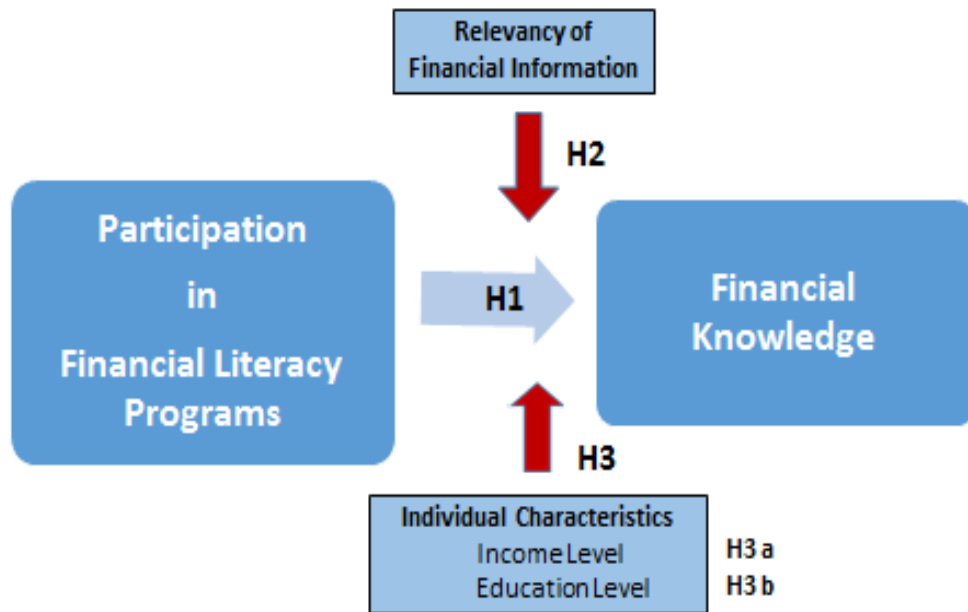


Figure 1: Conceptual Model and Hypotheses

## **Research Methodology**

The goal of this research study is to provide an initial exploration of how financial literacy education affects financial knowledge and the moderating effects of income and education. The objective is to see if attending and participating in a financial literacy seminar affects financial knowledge. Also, the research is intended to reveal if there is a significant difference in how the relevancy of financial information affects the comprehension of financial information, and how that relationship is affected by demographics such as income, education, race, age, marital status, employment status, and gender in underserved communities.

Participants in the surrounding communities of North Courtland, Alabama, and Maysville, North Carolina were invited to attend a free financial literacy seminar. The participants assisted with the evaluation of the instruments. The seminar began with an interactive financial literacy information session which focused on the following topics: (1) Savings/Budgeting; (2) Banking (Credit Union vs. Banks); (3) Compound Interest /Rule of 72; (4) Credit and FICO scores; and (5) Taxes (Investing). Each session ranged from 12 to 18 minutes. Two 10-minute breaks were given during the 90 minute study.

The sessions placed emphasis on providing relevant financial information to members of historically disenfranchised locations and providing alternate methods to consumers to assist them when making major and minor financial decisions. After the session, there was a question and answer session to gauge the participant's understanding of the financial information received. This was a pilot test of the instrument. Participation was voluntary. The seminar was scheduled for 90 minutes with an additional 15 to 30 minutes scheduled for questions. The data collected was intended only to assess the value of the instruments.

Behavioral science scholars have found it very challenging to provide a comprehensive measure of financial literacy. Lusardi and Mitchell (2011a) designed a simple financial literacy module that has proven effective in measuring knowledge of simple, but fundamental financial decision making concepts and enabling comparisons of that knowledge across countries with their questionnaires. The pre-knowledge check questionnaire was derived from the National Financial Capability Study (NFCS), designed by the Financial Industry Regulatory Authority (FINRA) Investor Education Foundation. The overarching research objectives of the National Financial Capability Study were to benchmark key indicators of financial capability and evaluate how these indicators vary with underlying demographic, behavioral, attitudinal, and financial literacy characteristics. The study also reinforces the 2009 findings that financial capability varies widely by socio-economic status and other demographics.

The post-knowledge questionnaire was developed using a combination of the NFCS, Standard & Poor's Ratings Services Global Financial Literacy Survey (S&P Global FinLit Survey), the Health and Retirement Study (HRS), and from the Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA-CREF) financial challenge. The S&P Ratings Services Global Financial Literacy Survey is known as one of the most extensive measurements of global financial literacy to date. The survey was based on interviews with more than 150,000 adults across 148 countries. Of the 148 countries targeted for data collection in 2014, 144 countries successfully collected data and met Gallup quality standards. The survey aligns with this dissertation objectives to provide valuable data to regulators, sovereigns, NGOs, and policymakers, and to help them understand people's current knowledge of basic financial concepts. The TIAA-CREF financial challenge was presented to Temple University employees to help prepare employees for retirement.

The National Financial Capability Survey asks three questions covering fundamental concepts of economics and finance, and one question about how individuals assess their financial knowledge. The S&P Ratings Services Global Financial Literacy Survey asks five questions relating to risk diversification, inflation, interest, and compound interest. Annamaria Lusardi and Olivia Mitchell (2011a) designed a special module on financial literacy for 2004 Health and Retirement Study (HRS) measuring financial knowledge. This survey asks three questions relating to financial literacy, such as how interest rates work, the effects of inflation, and the concept of risk diversification. The TIAA-CREF financial challenge asked five new questions on a daily basis that covered everyday financial matters. These instruments were chosen based on the demographics and characteristics of the previous individual that had taken the survey and the relevance of the information for underserved communities. Information on the financial literacy workshop, by unit, with equivalent lessons and adjustments, can be found in Appendix D.

#### *Site 1: North Courtland*

The first trial study of the instruments was conducted in North Courtland, Alabama at the North Alabama Baptist Academy. North Courtland is identified as Site 1 for this study. North Courtland, according to the 2010 census, has a population of approximately 632 people. According to POLICYMAP, the racial characteristics of the residents in the area from 2009-2013 are 1.2% white, 98.2% African-American, 0.7% Hispanic, and no records of Asian, Native Hawaiian, Pacific Islander, Native American, or Alaska Native populations. The Census reported the per capita income for the town was approximate \$12,776 while the median household income was \$22,708 as estimated by the 2009-2013 American Community Survey, compared to the state of Alabama, at \$43,253. In 2000, 19.8% of families and 28.1% of the population were below the poverty line. Over 51% of the households in this area had household incomes of less than

\$25,000 (Policymap, 2016). According to areavibes.com, the average home cost in North Courtland, Alabama is \$68,000, while rent averages around \$285. The median home price in North Courtland is 62% lower than the national average. The median rent asked in North Courtland is 68% lower than the national average. The Mayor of North Courtland and his staff informed community leaders and local churches about the free financial literacy workshop. Flyers were placed at the post office, supermarket, Dollar General store, and local churches. The workshop was also announced via numerous social media platforms.

### *Site 2: Maysville*

The second study of the instruments was conducted in Maysville, North Carolina at the New Hope Church of God in Christ (COGIC). Maysville is identified as Site 2 for this study. The city of Maysville, according to the 2014 PolicyMap and Census data, was approximately 1,098 people. Between 2010-2014, the racial demographics of the residents in this area were 46.9% white, 40.9% African-American, 2.2% Hispanic, 0.8% Asian, 3.3% Native Hawaiian or Pacific Islander, 1.6% American Indian or Alaskan Native, 6.2% two or more races, and no percentages recorded for the category “some other race”. According to the Census, the per capita income for the town is approximate \$11,119 while the median household income from 2010-2014 was \$32,639 as estimated by the 2010-2014 American Community Survey, compared to the state of North Carolina with a median of \$46,693. About 19.9% of families and 26.2% of the population were below the poverty line in 2000. The percentage of households that make less than \$25,000 was over 45% from 2009-2013 (Policymap, 2016). The average home in Maysville, North Carolina is approximate \$104,600 and \$525 is the average monthly cost of rent. The median price for a home in Maysville is 42% lower than the national average. The median rent in Maysville is 42% lower than the national average. In Maysville, I solicited the assistance

of a fellow Army veteran and colleague to assist with distributing flyers to surrounding communities, shopping centers, and local churches.

Site 1 provided a projector for the PowerPoint presentation. No projector was available for use at Site 2; accordingly, paper copies of the presentation were given to attendees.

## **Results**

The outcomes from the exploratory evaluation of the instruments revealed that the planned research methodology could be tested. Initially, the pre-test consisted of 5 questions, while the post-test consisted of 15 questions. It became difficult to evaluate questions from the post-test as they could not be compared directly against the pre-test. Accordingly, I determined that the pre-test questionnaire and post-test should be the same number of questions and contain the same information. I adjusted the format, structure, and number of questions. Future tests will consist of 8 questions. The demographics survey was adjusted and narrowed the range of the participant's income to get a more definitive measure of actual income and how they value money. The survey determined that an increase is needed from 9 to 10 questions; I add a question on ethnicity. This study was intended to be preliminary and exploratory, with the focus on pretesting the instruments.

Financial literacy remains a topic that is private and not discussed in a lot of different cultures and especially in underserved areas or families where funds are scarce. Financial literacy is not easy to teach or learn; we must develop programs that can reach these societies and develop hope within the citizens so they can become prudent productive residents of their communities.

## **Theoretical and Managerial Significance**

### *Theoretical Contributions*

Financial education is essential, mainly due to the complexity of the ever-changing financial system. Financial markets are becoming more and more complex by the day for the average citizen. These financial markets are even more complex for individuals who have not had the opportunity to learn basic fiscal and economic concepts. Knowledgeable and informed consumers are an asset to the U.S. financial system; financial education would seem to benefit the nation as a whole, at a minimum we should have a more financially literate society. This report does contribute to the empirical evidence that examines the details of the knowledge of underserved individuals by reviewing past research on the connection between poverty and financial literacy.

### *Managerial Implications*

Why should an executive in corporate America care about financial literacy? Most executives and senior managers have a deep appreciation for citizens, their communities, and their employees, and feel this should become part of their civic duties. Understanding what drives financial decision making for consumers and employees is a major human capital factor when it comes to increasing morale for employees and providing a service to customers. In most Organization for Economic Co-operation and Development (OECD) countries, the gap between the rich and the poor is at its highest level in the past 30 years. Today, the richest 10% of the population in the OECD area earn 9.5 times the income of the poorest 10% (Cingano, 2014).

Employers should be very excited to provide individual Americans with the knowledge and skills they need to make the right financial choices for their futures, which also affects the

future of the nation. In the U.S. stress is one of the leading causes for the loss of employee productivity. Financial stress is perceived to be one of the most important sources of psychosocial stress because so many of the basic activities of daily life are associated with personal financial resources and their management (Peirce, Frone, Russel, & Cooper, 1996). Employees who are less concerned about their financial situation are more than likely to be more productive.

The health of the nation's financial system depends on the ability of its people to effectively manage their finances. Working adults (employees) present a formidable group of individuals in need of financial information to effectively utilize employee benefits. One of my beliefs is if corporations invest more in their employee's financial literacy educational programs, the investment benefits will probably outweigh the costs.

### *Limitations*

Some methodological challenges might have affected the findings. These include the literacy level of the participants, and participant interest in money. This study assumes that money has some intrinsic value to participants, while it could be the case that many of the participants are satisfied with their financial status, or do not highly value financial wealth. Additional factors that might have affected the study include factors regarding the session itself (i.e., length of the session and quality of the teaching), learning conditions (comfort of the space, temperature, and noise level), and perceptions and characteristics of the instructor (i.e., believability/trust, rate of speech, and desire to help).

The demographics data (income, race, age, and gender) were self-reported. On average, self-reported income is higher than the median for those cities and are not necessarily an accurate portrayal. In future studies, I will give respondents an option to differentiate within the “under



\$25,000” range (i.e., 0-\$5,000 and \$5,001-\$10,000). The actual age and income of participants could be on a scale that is higher or lower than what is reported. The instructor’s materials, presentation style, and overall reading level of the participants are major factors that could have skewed an individual’s ability to mark the correct answers on the pre- and post-tests. Lastly, the sample size tested for this study was moderate, and a larger and more diverse sample may have yielded different outcomes.

A challenge for the survey development was not knowing the overall reading ability and knowledge level of the individuals in attendance. This could make the questions seem biased towards particular groups. An additional limitation may also stem from having one instructor who developed all the materials. Future studies should consider additional controls. The testing and training were conducted in a single two-hour session, and more time may be needed. Pre- and post-discrepancy could be the result of the seminar attendees becoming over-confident in their abilities after attending the workshop. A factor influencing an attendee's results could come from the participants being overwhelmed with new knowledge after attending an event and misapply it thinking that they “know better” after attending the seminar. The results reinforce previous findings that people normally need 3 to 4 repetitions or exposures to fully absorb new material. Learning is not complete until it can be applied and made fully actionable.

#### *Future Research Ideas*

Future research can examine the relationship between the economic status of an area and the availability of financial education and training programs. For example, in underserved rural areas, the nearest library or credit union could be 20 miles away; the accessibility to financial literacy programs could make a major change in one’s income status. Researchers should also

consider studying what it would take to mandate financial literacy training in all schools, colleges, and federal aid programs. More research is needed to explore and examine individual-level characteristics that might have further influence on financial decision making.

Additionally, future research might assess participant's satisfaction with their current financial status as a part of the study. Individuals who are very satisfied with their current financial situation may not find any significance in the topics and material in the session. In fact, their participation might be more of courtesy to the researcher than a desire to learn more.

Most participants in this study occupied lower levels of socio-economic status. It could be possible that for individuals at the lower levels of social and economic status, financial wealth means much less to them, or may seem less attainable, compared to the rest of the population. The use of in-depth interviews and surveys about access, resources, and relevance is needed to uncover these key underlining factors.

## **Conclusion**

Most financial literacy campaigns are necessary and somewhat beneficial. Literacy programs vary in their cost, location, curriculum, and which populations of society will receive the training. Minorities, low-income citizens, and immigrants seem to be the most susceptible to predatory lending and fraud. Therefore, there remains a significant opportunity to better engage this segment of society. According to Morris and Perry (2005), some governmental regulatory agencies, consumer groups, and financial institutions have developed consumer education and outreach programs designed to increase consumers' financial literacy, with a particular focus on minority consumers. However, it is difficult to find these programs? The relevant inquiry for researchers about financial literacy is where do we start and at what age? The most logical answer would be to start at home with their parents, but research has shown that a lack of

confidence in adult financial management skills is what keeps parents from discussing some of the more complex and crucial money issues with their children (Khalfani-Cox, 2011). With this knowledge, the focus could shift to increasing adult financial awareness. To do this, community leaders must get more involved in evaluating their respective regions that need assistance, and in recommending to the city, state, federal officials what should be the priorities. A financially literate individual will be able to assist and teach others in their communities to make better financial decisions, save more, and be better prepared for emergencies.

Most underserved and poor communities do not have the financial support structure available to help lift them out of their current predicament. People require trust and confidence when agreeing to assist with their financial affairs and to feel that their best interests are a priority. This study revealed that getting the underserved to attend free financial literacy seminars is a difficult task. Encouraging individuals in underserved locations to participate and pay attention and answer questions is also tough. I have learned that participation does not necessarily improve financial knowledge, even in the short term. Further research is needed to review the unknowns about long-term knowledge and how that affects financial decision making.

## **ESSAY 2: AN EMPIRICAL EXAMINATION OF THE EFFECT OF A FINANCIAL SEMINAR ON FINANCIAL LEARNING**

Personal finance is a vital aspect of a person's life. Understanding how money works and knowing how credit plays a role in some everyday purchases can make one's life much better. Learning about finances will give consumers the knowledge and understanding to make smart choices about money. It gives individuals the freedom and power to choose. The more people learn about finance, the more they can free themselves from debt, and hopefully relieve some stress about money.

Financial literacy is of particular importance to individuals in underserved communities, but financial literacy training is not always effective. Many barriers restrict individuals from learning, such as cultural differences and their immediate economic environment. Many assumptions are often made about financial literacy, but past results have been mixed regarding its usefulness. It is important to test empirically the effectiveness of financial literacy training at the ground level.

This essay builds on the foundation of essay one by empirically testing the conceptual model of financial literacy previously developed. It analyzes whether financial training is helpful to underserved communities. The goal is to continue the initial exploration of how financial literacy education affects financial knowledge and the moderating effects of income and education. One of the objectives is to understand if attending and participating in a financial literacy seminar affects financial knowledge. Secondly, the study aims to examine the nature of financial information relevancy. In particular, it is hypothesized:

*H1: Participation in a financial literacy program has a positive effect on financial knowledge.*

*H2: The more relevant the financial knowledge taught in financial literacy programs, the more positive is the effect of learning in the program on financial knowledge.*

In addition, the research is intended to examine further how individual characteristics such as income, education, race, age, marital status, employment status, and gender in underserved communities affect the learning outcomes and comprehension of financial information. Of particular interest is the effect of the geographic and economic environments. Geography is relevant, as most people do not have the freedom to choose where they originally reside. Due to the high levels of segregation and housing discrimination against minorities, especially blacks, these vulnerable populations are spatially constrained to neighborhoods of relatively low socio-economic status (Logan & Alba, 1993). The geographic and the economic environments have become imperative in attempting to resolve some elements of poverty and encouraging individuals to become financially literate. According to research conducted by Mayer and Jencks (1989), growing up in poor neighborhoods is an influential factor. The idea that economic segregation makes it hard for children to escape from poverty is closely related to the idea that racial segregation makes it hard for black children to advance in a society dominated by whites (Mayer & Jencks, 1989).

According to South and Crowder (1997), residents of the very poorest neighborhoods have farther to travel (in an economic, as well as a spatial, sense) in order to move to a non-impooverished neighborhood, since moving from a non-impooverished area requires an even greater upgrading in neighborhood quality. There are four schools of thought on how neighborhoods affect behavior (South & Crowder, 1997). The first school of thought states that disadvantaged neighbors are a disadvantage. This draws from a contagion model of how immediate environments (neighborhoods) have direct effects on future behavior. If children grow

up in neighborhoods with high rates of crime and high rates of births out of wedlock, they are more than likely to repeat these patterns. Having more privileged neighbors is also a disadvantage. This second school of thought refers to the relative deprivation model that neighbors with higher socioeconomic status (SES) create feelings of resentment, ultimately causing their less privileged neighbors to engage in a deviant subculture.

Another school of thought proposes that disadvantaged neighbors are irrelevant. Economists assume that people base their decisions on their circumstances and long-term interests, not on their neighbors' ideas about what is sensible, desirable, or acceptable. There are examples of children in the poorest neighborhoods who stay out of trouble, finish high school, go to college, and find a good job. Conversely, there are children from affluent neighborhoods who hate school, reject parental guidance, and are frequently in conflict with police and other figures of authority. The fourth and final school of thought argues that neighbors do not matter, but neighborhoods do. The institutions and resources available to a given neighborhood are more influential than the behaviors of individual neighbors. Comparatively, factors such as police bias and unequal access to educational and economic resources and opportunities far outweigh the influences of the immediate environment of a given neighborhood (Mayer & Jencks, 1989). Therefore, it is hypothesized:

*H3: Individual characteristics, including geography, moderate the positive effect of participation in a financial literacy program on financial knowledge.*

## **Research Methodology**

### *Financial Seminars with Pre-Test and Post-Test*

To test the hypotheses, I conducted two financial literacy seminars, one in a northern urban area and one in a rural southern location in the United States. The participants were individuals who are low- to middle-income, mostly African-Americans. The two different geographic settings were: 1) an affluent Northern Virginia suburb (Fairfax Station); and 2) a small city in the rural South (Pell City, Alabama). Individuals were invited to attend a free financial literacy seminar. The participants provided informed consent before participation. The financial literacy of the participants was assessed using a pre-seminar knowledge check and a post-seminar knowledge check.

### *Focus Group on Financial Relevancy*

An assessment of the financial relevancy of the questions is an important component of H2. To explore in more depth the perceptions of the underserved urban population regarding the relevancy of financial information, I conducted a focus group in a disadvantaged urban neighborhood in Saint Louis, Missouri. An objective of this section of the study was to gain a better understanding of the perceived relevancy of the financial literacy questions.

The focus group included discussions about savings funds for emergencies, budgeting, purchasing decisions, credit and FICO scores, and deliberations on interest rates and taxes. I used the knowledge checks questions, demographics survey, and interview questions to guide the discussions. The focus group session lasted approximately 75 minutes, which allowed additional time for follow-up questions and questions from the participants.

The focus group enabled underserved individuals to express their actual thoughts and opinions on the financial literacy instruments present in the seminars, and their views on the

relevance of financial education. These participants were asked to rate the relevancy of the financial topics covered in the financial literacy seminars. Their answers were compared to the responses from a sample of financial experts. The relevancy ratings were collected from 26 individuals, including 15 focus group participants and 11 financial experts from the National Credit Union Association (NCUA), Organization of American States Credit Union, Hope Federal Credit Union, a nonprofit organization (a CEO), U.S. military financial professional, federal financial professionals and a financial broker/advisor. This enabled a statistical test of differences in perceived relevancy between this group of underserved individuals in an urban area, and the group of financial literacy experts.

#### *Financial Relevancy Questionnaire Instruments*

The St. Louis focus group participants and the financial literacy experts were asked to rate each question on a scale of 1 to 7 (1=not relevant to 7=extremely relevant), measuring the relevancy of the topics in each question. There were 8 questions evaluated on the following subjects: Questions 1 and 2 discuss saving, and interest rates, Question 3 discuss taxes, Question 4 discuss borrowing and interest rates, Question 5 discuss investments, Question 6 discuss financial institutions, Question 7 discuss borrowing, and interest rates and Question 8 discuss credit reports. (See Appendix H for ST. Louis participants; and Appendix I for the financial experts).



### *Seminar and Questionnaire Instruments*

The financial literacy seminar discussions in Fairfax Station and Pell City included conversations on understanding how credit scores affect purchasing power, how compound interest and savings can assist individuals, and how to apply different methods of financial decision making in everyday transactions. The seminars explain to the audiences their options on 15- and 30-year mortgages, discuss stocks and mutual fund risk. The presentations describe why financial literacy is important and how it could affect an individual's future and current employment opportunities.

I reevaluated and modified the three preliminary instruments used in the pilot tests of essay one. An 8 question pre-knowledge check was used to evaluate the basic financial knowledge of individuals before the dissemination of any instructions. The 8 questions were configured from the results of the FINRA Investor Education Foundation US Financial Capability Study (Appendix E) and survey results from a variety of financial experts. The second instrument is an individual survey. The study gathers demographics characteristics from all participants who attend the seminar. The 10 question survey asks participants about their gender, year of birth, zip code, race, education level, marital status, employment status, and income (Appendix G). The survey was revised to reflect income ranges historically associated with most underserved individuals. The third instrument previously designed with 15 questions has been reduced to an 8 question post-knowledge check. I revised the post-knowledge check to include the same questions identified in the pre-test, but the order was rearranged to test knowledge of, and confidence in, personal finance (Appendix F).

### *Fairfax Station, Virginia Location*

Data collection took place at the Fairview Elementary School, in Fairfax Station, Virginia, and was sponsored by the Great Salvation Christian Fellowship Church. The Virginia site met the criteria for a northern urban area, where underserved individuals reside and worship. The area is not considered an underserved community economically, but this site was selected to examine the financial literacy of low- to middle-income minorities living in an affluent area. Fairfax, Virginia is an upper-income area and predominantly white, however, over 90% of the people that attend Great Salvation Christian Fellowship Church are black or of minority descent. The interest and support displayed by the Pastor, community leaders, and members of Great Salvation Christian Fellowship Church were also a factor with sponsoring such an event. The median household income in this area was \$163,796, compared to the state of Virginia with a median of \$64,792. In 2014, 8% of homes in the study area had an annual income of less than \$50,000, compared to 39% of people in the state of Virginia.

According to POLICYMAP (2016), the racial characteristics of the people living in Fairfax Station between 2010-2014 were 75.3% white, 6.1% African-American, 6.3% Hispanic, 13.01% Asian, no percentages of either Native Hawaiian or Pacific Islander, 0.3% American Indian or Alaskan Native, 0.4% "some other race", and 4.7% two or more races. As of 2014, the area was home to an estimated 11,081 people. An estimated 90.7% or 3,457 households owned their home between 2010-2014 in Fairfax Station. The average size of a family in this area was 2.9 between 2010-2014, as compared to the average household size for the county and the state, 2.8 (Fairfax) and 2.6 (Virginia), respectively.

*Pell City, Alabama Location*

Pell City, Alabama is a small, southern rural city in St. Clair County, Alabama, with a population of about 13,000. The city has one dedicated FM radio station and is served by two daily and two weekly newspapers. Pell City is located on Interstate 20 in the vital Atlanta – Birmingham corridor. The population is 81.99% white, 14.7% black, and 1.9% Asian. The median income is \$40,961 with a 6.9% unemployment rate. The median home price in Pell City is \$162,900, and the average rent price is \$698 per month (areavibes.com, 2016). 21.1% of households in Pell City live in poverty. The data collection took place at the Christ In Me Church in Pell City, Alabama. Demographic of the individuals that participated are in Table 5.

Table 5.  
Demographics of the sample

		<i>N Virginia/ Fairfax (n = 41)</i>		<i>Pell City (n = 83)</i>		<i>Total (n = 124)</i>	
		<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>	<i>f</i>	<i>%</i>
Median Age		45		45		45	
Gender							
	Male	20	48.8	31	37.3	51	41.1
	Female	21	51.2	52	62.7	73	58.9
Education							
	Some high school	0	0.0	8	9.6	8	6.5
	High school degree	7	17.1	47	56.6	54	43.5
	Trade Tech	0	0.0	6	7.2	6	4.8
	AA degree	13	31.7	10	12.0	23	18.5
	BA degree	11	26.8	6	7.2	17	13.7
	Master's degree	8	19.5	6	7.2	14	11.3
	Professional degree	2	4.9	0	0.0	2	1.6
Marital Status							
	Single	16	39.0	47	56.6	63	50.8
	Married	25	61.0	36	43.4	61	49.2
Employed							
	No	8	19.5	18	21.7	26	21
	Yes	32	78.0	65	78.3	97	78.2
	<i>not specified</i>	<i>1</i>	<i>2.4</i>	<i>0</i>	<i>0.0</i>	<i>1</i>	<i>0.8</i>
Income							
	under \$25K	1	2.4	25	30.1	26	21.0
	\$25-50K	19	46.3	46	55.4	65	52.4
	\$50-75K	7	17.1	7	8.4	14	11.3
	\$75-100K	7	17.1	5	6.0	12	9.7
	over \$100K	7	17.1	0	0.0	7	5.6
Rent/Own Home							
	Rent	21	51.2	42	50.6	63	50.8
	Own	18	43.9	40	48.2	58	46.8
	<i>not specified</i>	<i>2</i>	<i>4.9</i>	<i>1</i>	<i>1.2</i>	<i>3</i>	<i>2.4</i>
Race							
	Black	30	73.2	78	94.0	108	87.1
	Latino	2	4.9	2	2.4	4	3.2
	White	8	19.5	3	3.6	11	8.9
	<i>not specified</i>	<i>1</i>	<i>2.4</i>	<i>0</i>	<i>0.0</i>	<i>1</i>	<i>0.8</i>

### *Saint Louis, Missouri Location for the Focus Group:*

The focus group session took place with a small group of residents from the Brantner (Jeffvanderlou) neighborhood of Saint Louis, Missouri. The population of this area is 97.2% African-American, 1% white and .2% Asian. The median household income is \$19,841, and the unemployment rate is 11.6%. The median home price is \$94,269, and median rent price is \$611 per month.

### **Results Regarding Financial Question Relevancy**

The first step was to analyze the focus group data to determine which financial literacy questions were the most versus the least relevant and to compare this to the responses from the group of financial experts. Focus group relevancy ratings were collected from 26 individuals, including 15 focus group participants and 11 financial experts.

To determine the inter-rater reliability for the focus group participants and the financial experts on the relevance of the eight financial literacy questions, a series of intraclass correlations were computed using a two-way random effects model, where both people effects and measures effects are considered random. As shown in Table 6, the internal consistency and absolute agreement between the 15 focus group participants was very high, ranging between .918 and .923. On the other hand, the internal consistency and absolute agreement between the 11 financial experts were low, ranging between .150 and .213.

Table 6.  
Intraclass Correlations

	Intraclass Correlation	95% Confidence Interval	
		Lower Bound	Upper Bound
Focus Group Participants ( <i>n</i> = 15)			
Type C (Consistency)	.923	.814	.982
Type A (Absolute Agreement)	.918	.805	.980
Financial Experts ( <i>n</i> = 11)			
Type C (Consistency)	.213	-.947	.814
Type A (Absolute Agreement)	.150	-.457	.740

The financial literacy questions were grouped into the most relevant versus the least relevant based on the average ratings shown in Table 7. The 8 questions were divided in half, with the 4 questions that received the highest relevancy ratings being considered the most relevant, and the 4 questions that received the lowest relevancy ratings being considered the least relevant. The focus group and financial experts differed marginally in which items they considered most and least relevant. Mann-Whitney U tests were conducted to compare the relevancy ratings between the focus group participants and the financial experts. Only Question 2, having to do with interest and inflation rates, was found significantly different between the two types of relevancy raters (Mann-Whitney U = 43.5,  $p = .041$ ). Responses to the most and least relevant questions based on the focus group ratings and again on the financial expert's ratings, were summarized in order to test Hypothesis 2 having to do with the impact of relevancy on knowledge gain.

Table 7. Relevancy ratings for the financial literacy questions

Financial Literacy Questions	Average Relevance				Mann-Whitney <i>p</i> -value
	Focus group (n = 15)		Financial expert (n = 11)		
	Most Relevant	Least Relevant	Most Relevant	Least Relevant	
1 Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? Q 1 is about saving and interest rates.	6.87		6.00		.097
2 Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? Q 2 is about saving and interest rates.	6.87			5.36	.041
3 Which is worth more to a taxpayer? (tax credit vs. tax deduction) Q 3 is about taxes.		6.40		5.64	.259
4 A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less. (true or false) Q 4 is about borrowing and interest rates.		5.80		5.73	.878
5 Buying a single company's stock usually provides a safer return than a stock mutual fund. (true or false) Q5 is about investment.		4.93		5.09	.646
6 What is the difference between a bank and a credit union? Q 6 is about financial institutions.		6.60	5.91		.507
7 Which usually has the highest interest rate for a short term loan of 30 days or less? Q 7 is about borrowing and interest rates	6.67		6.64		.610
8 Which of the following statements best describes your right to check your credit history for accuracy? Q 8 is about credit reports.	6.73		5.82		.281

The 8-question knowledge assessment was administered before and after the financial literacy seminars. Summary statistics for the assessments are presented in Table 8. As shown by the skewness statistics (skewness (SK), standard error of skewness (SE) and SK/SE), all measures were moderately well-distributed, meeting the assumption of normality for computing the statistics to test the hypotheses.

Table 8.  
Summary Statistics for Knowledge Assessments (n = 124)

	Mean	SD	Skewness	SE	SK/SE
<u>Pretest</u>					
Least relevant – Focus Group	0.55	0.26	0.02	0.22	0.08
Most relevant – Focus Group	0.61	0.25	-0.08	0.22	-0.36
Least relevant – Expert Group	0.61	0.26	-0.25	0.22	-1.16
Most relevant – Expert Group	0.55	0.30	-0.32	0.22	-1.46
Total	0.58	0.21	0.26	0.22	1.22
<u>Posttest</u>					
Least relevant – Focus Group	0.72	0.20	-0.12	0.22	-0.56
Most relevant – Focus Group	0.81	0.19	-0.74	0.22	-3.42
Least relevant – Expert Group	0.67	0.22	-0.18	0.22	-0.85
Most relevant – Expert Group	0.86	0.18	-0.35	0.22	-3.22
Total	0.77	0.15	-0.67	0.22	-3.08
<u>Gain Score (Post - Pre)</u>					
Least relevant – Focus Group	0.18	0.27	0.08	0.22	0.38
Most relevant – Focus Group	0.19	0.27	0.07	0.22	0.34
Least relevant – Expert Group	0.06	0.28	-0.01	0.22	-0.04
Most relevant – Expert Group	0.31	0.30	0.26	0.22	1.18
Total	0.18	0.17	0.04	0.22	0.19



## Results of the Hypothesis Testing

The financial literacy program was administered to 41 individuals in Fairfax Station, and 83 individuals in Pell City, Alabama. The information collected from the instruments were converted to quantitative files. This enabled descriptive statistical analysis and regression and ANOVA models. Hypothesis 1 stated that participation in a financial literacy program has a positive effect on financial knowledge. This hypothesis was tested using a repeated measures analysis of variance on the pre- and post-test total knowledge scores. As shown in Table 9, a significant gain in literacy was observed,  $F(1,122) = 122.05$ ,  $p < .001$ . Therefore Hypothesis 1 is supported. The site was included as a between subjects factor, and a significant difference was found between the two sites in overall literacy. However, the gain in literacy was not different between the two groups, as evidenced by the lack of a significant interaction effect. In other words, although participants from Fairfax Station scored higher in literacy on average, both the groups in Fairfax and Pell City showed a similar gain in literacy as a result of the financial program.

Table 9.  
Repeated measures by site analysis of variance on the pre-to-post gain in financial literacy

	Pre-Literacy		Post Literacy		Pre-Post Gain		Site		Interaction	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
N Virginia/Fairfax ( <i>n</i> = 41)	0.71	0.23	0.87	0.13	122.05	<.001	40.71	< .001	1.45	0.231
Pell City ( <i>n</i> = 83)	0.52	0.17	0.72	0.13						

In order to assess which particular questions were driving the gains in financial literacy, the percent correctly answered was calculated for each question in the survey, both before the program and afterward. As shown in Table 10, the biggest gain was for Question 6, regarding the difference between a bank and a credit union. The gains in literacy were also significant for Questions 1 and 8 relating to the increase in interest over time and the right to check credit history. Surprisingly, the percent correct decreased slightly for Question 5, relating to the difference in safety between a single company's stock versus a stock mutual fund.

Table 10.  
Pretest and posttest percent correctly answered questions

Financial Literacy Questions	Pretest	% Correct	
		Posttest	Difference
1 Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?	59%	85%	26%
2 Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?	63%	68%	5%
3 Which is worth more to a taxpayer? (tax credit vs. tax deduction)	45%	63%	18%
4 A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less.	71%	77%	6%
5 Buying a single company's stock usually provides a safer return than a stock mutual fund. (true or false)	64%	58%	-6%
6 What is the difference between a bank and a credit union?	39%	91%	52%
7 Which usually has the highest interest rate for a short-term loan of 30 days or less?	61%	77%	16%
8 Which of the following statements best describes your right to check your credit history for accuracy?	63%	93%	30%

Hypothesis 2 stated that the more relevant the financial knowledge taught in financial literacy programs, the more positive would be the effect of learning in the program on financial knowledge. This hypothesis was tested with a repeated measures analysis of variance on the two gain scores from the least relevant questions and the most relevant questions in the knowledge assessment. The test was conducted twice, once for the ratings from the focus group of underserved residents in St. Louis, and once for the financial expert's ratings. As shown in Table 11, there were no significant differences between the gain scores obtained with the least relevant and the most relevant knowledge questions based on the focus group ratings. However, using the financial expert's ratings, a significant difference was found between the amount of gain in knowledge on the most relevant questions compared to the least relevant questions,  $F(1,123) = 27.27, p < .001$ . There were no site differences or interaction effects found. Referring to Table 8, the average knowledge gain for the most relevant questions (.31) was significantly higher than for the least relevant questions (.06). Therefore Hypothesis 2 is partially supported.

Table 11.  
Repeated measures by site analyses of variance on the most relevant and least relevant gain in financial literacy

	Gain in the least Relevant Questions		Gain in Most Relevant Questions		Least-Most Repeated Measure		Site		Interaction	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
<u>Focus Group Rating</u>										
N Virginia/Fairfax ( <i>n</i> = 41)	0.16	0.22	0.15	0.26	0.04	0.851	1.45	0.231	0.25	0.622
Pell City ( <i>n</i> = 83)	0.18	0.29	0.21	0.27						
<u>Expert Group Rating</u>										
N Virginia/Fairfax ( <i>n</i> = 41)	0.07	0.24	0.25	0.32	27.27	< .001	1.45	0.231	1.32	0.253
Pell City ( <i>n</i> = 83)	0.05	0.29	0.34	0.29						

Hypothesis 3 stated that individual characteristics moderate the effect of learning in a financial literacy program on financial knowledge. Specifically, Hypothesis 3a stated the expectation that the higher the individual's income, the more positive the effect of learning in a financial literacy program on financial knowledge, and Hypothesis 3b expected that the higher the individual's education level, the more positive the effect of learning in a financial program on financial knowledge. These hypotheses were tested using a repeated measures analysis of covariance. The literacy scores at pre-test and post-test are the repeated measures, using site as a between-subjects factor, and covarying education and income. As shown in Table 12, no interaction was found between the literacy gain and income. However, there was a significant interaction between education and the pre-post gain in literacy, indicating that level of education had a significant bearing on the effect of learning in a financial program. In order to interpret this finding, a Spearman correlation was conducted comparing the level of education with the pre-post gain in literacy. A negative correlation was found ( $\rho = -.276$ ,  $p = .002$ ), indicating that the higher the individual's education level, the less positive the effect of learning in a financial program on financial knowledge. This finding is significant, but in the opposite direction of what was hypothesized. With regard to income, Hypothesis 3a is not supported, and with regard to education, Hypothesis 3b is not supported. However, this finding does have important implications for financial literacy programs, as it indicates that financial literacy programs are more beneficial to individuals with lower levels of education.

Table 12.  
Repeated measures by site analysis of covariance on the pre-to-post gain in financial literacy,  
covarying education, and income

	Pre-Literacy		Post Literacy		ANCOVA Results		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>F</i>	<i>p</i>
N Virginia/Fairfax ( <i>n</i> = 41)	0.71	0.23	0.87	0.13	Pre-Post Gain	29.51	< .001
Pell City( <i>n</i> = 83)	0.52	0.17	0.72	0.13	Site	15.62	< .001
					Education	2.71	0.102
					Income	1.20	0.276
					<u>Interactions</u>		
					Gain * Site	0.08	0.778
					Gain * Education	5.16	0.025
					Gain * Income	0.06	0.808

### Post Hoc Analysis

Since a significant change in literacy was found, it was considered important to determine if the level of confidence participants had in their financial literacy had also increased as a function of the financial program. Although no formal hypothesis was made a priori, a post hoc analysis was conducted to assess the change in levels of confidence in financial literacy. For each of the knowledge questions, participants were asked to rate how confident they were in their answers to each of the 8 knowledge questions. The participants on a 7-point Likert scale from 1 (not at all confident) to 7 (highly confident) provided answers. The change in confidence levels was tested using a repeated measures analysis of variance with site as a between factor. As shown in Table 13, a significant gain in confidence was observed,  $F(1,123) = 66.99, p < .001$ . This analysis also revealed a significant interaction effect between the gain in confidence and site. This result is because the participants from the Fairfax Station site experienced a greater gain in confidence on average than the participants from Pell City.

Table 13.

Repeated measures by site analysis of variance on the pre-to-post gain in confidence

	Pre Confidence		Post Confidence		Pre-Post Gain		Site		Interaction	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
N										
Virginia/Fairfax ( <i>n</i> = 41)	5.04	1.38	6.13	0.72	66.99	< .001	0.31	0.86	5.55	.020
Pell City ( <i>n</i> = 83)	5.25	1.13	5.86	0.92						

An additional post hoc repeated measures analysis of variance was conducted based on the results of Hypothesis 2. This analysis was run in order to determine if the gain in confidence also differed by the relevance assigned to the questions by the financial experts. As shown in Table 14, the gain in confidence was significantly greater for the most relevant questions as compared to the least relevant questions,  $F(1,123) = 13.65, p = .001$ . There was a significant difference in the gain in confidence between the two sites, as was also seen in the prior analysis shown in Table 13. However, there was no interaction effect between site and the difference in confidence gained between the least and most relevant questions. The Fairfax Station respondents were more confident than the Pell City respondents, but this was not affected by the relevancy of the questions.

Table 14

Repeated measures by site analysis of variance on most relevant and least relevant gain in confidence

Gain in Confidence										
	Least Relevant Questions		Most Relevant Questions		Difference		Site		Interaction	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>	<i>F</i>	<i>p</i>
N										
Virginia/ Fairfax ( <i>n</i> = 41)	0.85	1.35	1.35	1.49	13.65	<.001	5.55	.020	1.52	.221
Pell City ( <i>n</i> = 83)	0.48	1.14	0.73	1.05						

**Conclusions and Contributions**

The results from this study built on the exploratory research conducted in essay one by testing the newly revised instruments (questionnaire and demographic survey) and validating if the material presented increased the participant's knowledge. Participation in a financial literacy program was found to have a positive effect on financial knowledge (H1), and the more relevant the financial knowledge taught in financial literacy programs (H2) was partially supported. However, the results do not support H3, the expectation that individual characteristics of income and education moderate the effects of financial education on financial literacy. In addition, geography (urban vs rural) seemed to matter in the context of consumer confidence in their financial knowledge, but not in other aspects.

Although H3 was not supported, the results, in practicality, provide some optimism for financial literacy programs focused on the less educated, as the less educated in this study did

learn more than than better educated. The results have provided a foundation for future researchers to conduct a study on how federal funding for financial literacy programs are determined, and conduct a comparison of how underserved areas are funded compared to moderate to high-income neighborhoods. Additional research could extend this study to compare and contrast participants' correct answers compared to the questions they felt more confident in on the survey. This could measure actual behavior effect against individual perceptions. Although it would be difficult to impleent, future research could involve a follow-up study with the same participants to test how individuals have improved over time or how much knowledge has been retained.

The biggest challenges continue to be how to reach and support the underserved segment of our society. The lower income and less educated individuals have been the most deprived and normally has more barriers to overcome to receive relevant financial literacy training. Underserved and poor individuals have been the target for predatory lenders and unscrupulous businesses for decades.

Overall, this study makes a modest but important contribution to the literature, as there have not been many studies examining the financial literacy of the underserved across geographic regions. The results imply that, yes, financial literacy education can make a difference in the financial knowledge of the underserved. Improvements in knowledge are of particularly important for individuals in underserved areas, this is perceived as the most relevant benefit. The results from this study can contribute to the financial education of underserved people in a practical manner, if the relevancies of the financial topics are taken into account, and if the relevancy is better explained to the participants. More generally, adding to knowledge in this area has the potential to lead to better efforts to improve the financial knowledge and



financial well-being of the underserved, and eventually help to reduce the number of people in poverty due to the lack of financial education and training. This contribution could help policymakers at the federal, state, and local levels to develop financial literacy programs that will assist underserved and lower income people, and help them to better understand the connection between financial education and financial decision making.

## **ESSAY 3: A COMPARISON OF PERCEPTIONS OF THE CHALLENGES OF FINANCIAL LITERACY AND FINANCIAL DECISION MAKING IN UNDERSERVED COMMUNITIES**

### **Research Motivation**

The exploratory research conducted in essay one revealed that there are potential benefits of an in-depth analysis of financial literacy to the individual decision-making process of underserved communities. Financial knowledge has also been shown to have an impact on behavior. There is the expectation that education in financial matters will not only increase individuals' literacy but also, by extension, improve their financial wellbeing. There are a few studies that have shown that financial understanding has a positive impact on improved financial decision-making (Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet et al., 2005: and Van Rooji et al., 2007). The empirical studies of essay two did not indicate that geography had a significant economic or environmental effect, but differences in confidence and other aspects across regions have the potential to be influential.

Insights are expected from digging deeper into the social and cultural context where people live. This requires a qualitative approach, a research method that is designed to help researchers understand people and what they say and do. According to Michael Myers (2013), one of the main advantages of qualitative research is that it allows a researcher to see and understand the context of decisions and actions as they are taking place. Qualitative research can also help researchers to understand the social and cultural contexts within which people live.

Essay three takes a deeper look into the themes expressed by financial literacy experts, and compares the words the respondents use to address specific issues of financial literacy in

underserved communities. In essay 2, H2 states that the more relevant the financial knowledge taught in financial literacy programs will yield the most positive effects of learning in the program on financial knowledge. Essay two's results revealed that the relevance of the questions did reveal a significant change in the participant's answer to the questions. The results also suggested that additional and more frequent training is needed. Mixed results from past research have indicated that not all financial education programs are equally effective. This should lead to future research to develop better programs as well as a standard financial literacy measure. Seeking the knowledge of experts in the field will assist in differentiating the reality of what underserved individuals need to learn versus the perception of what some experts think they should learn. This goal motivated this supplementary phase of the research.

## **Methodology**

This study is qualitative, using inductive reasoning. Qualitative research is useful for exploratory research and when someone wants to study a particular subject in depth. Qualitative research is typically used when the particular topics are new, or there is not much previously published material on the subject. The research of essay 2 was quantitative, in which I collected data from surveys and pre/post knowledge check questionnaires and a focus group. In this portion, I re-examine the relevance of financial information to see how the relevancy of the financial topics affects the understanding of financial information. I also explore how participation in a financial literacy program has a positive effect on financial knowledge, and seek to learn how individual characteristics such as income and education have a moderating effect on the learning from a financial literacy program. The research uses the triangulation method for corroborating findings and as a test for validity. Triangulation is the idea of using two or more techniques to gather data. One best practice used to examine underserved individuals'

financial decision making is interviewing. The interviews I collected are the main data collection procedure that I used that is closely associated with qualitative, human scientific research. The triangulated data allow me to review the data (surveys, knowledge checks, and interviews) from different angles.

### *Data Collection*

Qualitative research is an inductive process, and as the researcher, I am the primary instrument for data collection and analysis. The primary means to collect data for this study came from interviews. I used the bottom-up approach, which means that the concepts come from a detailed analysis of the data I collected. I began the analyses by coding the interviews. I identified and marked the texts in the interviews by topics (relevancy, the effects of participation in financial literacy programs, definitions of financial literacy, income and education). Once I collected the data, I used the hermeneutics approach to writing each narrative. The hermeneutics approach is known for its clarity, and it enables a much deeper understanding of people in business and organizational settings.

The interviewees (participants) have over 240 years of combined experience working with underserved communities and financial institutions. The different geographical locations of the respondents grant me an opportunity to compare and contrast urban against rural contexts and underserved and disadvantaged perspectives. The selection process employed a layered approach that began with federal executives from a financial regulatory agency, financial institution executives, and community leaders. By talking with and listening to individuals at these three levels of society, I hoped to gain insight into the important question underlying this research: Is financial literacy the answer to poverty, or does the answer lie elsewhere?

The financial executives selected from the federal government and corporate America came from positions that are at the forefront of developing and implementing financial policies that affect a range of individuals. The responses from these senior managers should offer some insight into their intentions and strategies regarding policies related to financial literacy. The information collected from community leaders gives a detailed overview of what is happening in the underserved community. The community leaders' interviews also give me alternative perspectives to consider. The interviews and focus group session involved individuals who live in underserved communities, and they can assist with finding out what has worked to improve individuals' financial decision making, and what has not worked.

#### *Data Collection Instruments*

The instrument for this study consisted of a list of 12 core financial literacy questions (see Appendix J) used to guide the interviews. I used a Sony digital voice recorder to record the interviews. Ten of the 12 participants were recorded. One of the candidates chose not to be recorded and the location for the other interview did not provide enough privacy for the digital recorder to record clearly. Once the interviews were complete, the audio recordings were personally transcribed using InqScribe digital media transcription software. I also used ATLAS.ti.8.0 software to assist with the coding of the transcripts.

The format for the interviews was a semi-structured arrangement. Semi-structured interviews combine the flexibility of the unstructured, open-ended interview with the directionality and agenda of the survey instrument. The topics of the semi-structured interviews were pre-determined; I formulated the questions from previous data collected from the pre- and post-knowledge checks, surveys, and the literature review. The questions were test piloted by

subject matter experts and reviewed by Institutional Review Board (IRB). The interviews were structured to be more of a conversation rather than a formal interview.

A few subjects arose during the interview that required follow-up questions. I asked additional questions to clarify those particular topics. In the development of these questions, it was imperative that the questions being asked were relevant to the research. Therefore, all interview questions must show a correlation to some aspect of the research questions or hypotheses (see Appendix M).

### *Data Collection Process*

Before the interview, each participant received an advance copy of the questions, a copy of the interview request permission form for signature (see Appendix K), and a copy of the approved Institutional Review Board (IRB) form dated 25 July 2016 (see Appendix L). There were three data points for this study: (a) participant interviews, (b) field notes, and (c) document analysis.

The primary point of data collection for this part of the research was the interviews. The participants' background and experiences helped me screen whether each participant had the ability to provide descriptive and relevant information as it relates to the research. I selected individuals with a minimum of 10 years of professional or community service working with underserved communities or teaching and working in a financial career field.

I averaged two attempts to contact selected participants for scheduling an interview. I initially contacted 16 potential candidates by general solicitation email. I introduced myself, described the purpose of my research, and requested the candidates to participate. Out of 16 requests, 12 accepted the invitation; two participants did not reply, one participant referred me to

another candidate, and one requested payment for their services. I received a 75 percent acceptance rate through my initial solicitation.

I immediately followed up with an email or phone call to ensure each participant understood the request and purpose of the interviews. I made a consistent effort to schedule the interviews within ten days of the initial communication. Individual interviews were planned for 30 to 40 minutes. The longest interview lasted approximately 50 minutes, and the shortest was approximately 27 minutes. The interviews were intended to be face to face or by telephone. I interviewed nine participants by phone, and the remaining three interviews were conducted in person. Within 24 hours of the interview, participants received a follow-up email thanking them for their time and participation, and I offered each participant the option to conduct member verification or review of the transcript of their interview. Upon receiving approved transcripts from participants, I utilized the interviews as a primary source for data analysis.

Limited notes were taken during each interview; however, interviews were scheduled in a way in which to allow ample time between interviews for internal processing and the writing out of interview notes. I devoted an hour and a half block for transcribing each interview to ensure I did not rush the thought and reflection process. I used ATLAS.ti.8.0 software to assist with the coding of the transcripts.

The interviews use the following outline as a guide:

- Introduce myself and thank each participant for being a part of the project.
- Mention previous surveys and studies I have completed and explain why this interview is important.
- Ensure confidentiality and explain how I will protect their privacy.

- Inform each participant that the interview will be approximately 45 minutes.
- Ask permission to record interviewee.
- Before beginning the interview, I ask each participant if they have any questions before we start.

The questions were designed to capture their experiences, opinions, feelings, and factual knowledge. Each interview started with a discussion of the participant's background and how it related to financial literacy and underserved communities.

### *Data Analysis*

Data analysis involved multiple stages of continually analyzing documents collected. Myers (2013) defines content analysis as a systematic approach to qualitative data analysis that looks for structures and patterned regularities in the text. Schwandt (2001) defines analyzing qualitative data as “the activity of making sense of, interpreting, or theorizing data” (p.6). After participants had a chance to review the transcripts and ask any additional questions, I began an initial review of my notes and began a search for patterns and themes in the general data and statements. This type of review is known as inductive reasoning, where the construct or theory emerges from the data. This allowed me to note any commonalities or consistencies between the participants instantly.

One of the most fundamental tasks in qualitative research is theme identification. I used multiple techniques for discovering themes in texts. I first read each transcript multiple times for key-words-in-contexts (KWIC); I attempted to analyze what my respondents are talking about by reviewing the words they use. I used the Atlas software to assist in labeling the themes by using



the keywords. I also used the compare and contrast approach, where I read each line or sentence of the transcripts and asked a series of questions referring to how it relates to the previous interviewer's statements. I also asked how it differs from the preceding or following statements. The Atlas software auto coding tool assisted with automatically coding segments of the text in the documents.

The ATLAS.ti.8.0 software assisted me with gathering the data into manageable bits of information. After comparing the transcripts and interview notes, the portion of the data that had been repeated by multiple participants was placed into common groups. Once similar responses had been compared and analyzed, I organized the sections into themes. Once the topics were determined; I incorporated Leech and Onwuegbuzie's (2007) method of displaying data into groups for triangulation purposes to promote trustworthiness within the study.

Four primary themes emerged from the data, including 1) defining financial literacy, 2) Financial Education Programs are Necessary, 3) Creating Meaningful, and Relevant financial education, 4) Application of Financial Knowledge (Education, Income, and Decision-making). These four themes highlight and showcase the various challenges cities, states and the federal government must overcome when attempting to meet the need of providing effective financial education for individuals and underserved communities today.

## **Findings**

In this section, I present the data gathered from interviews with 12 professionals of various background and experiences in urban and rural locations throughout the United States. As previously stated, the purpose of this research was to learn from individuals from different professions and geographical locations, and to compare and contrast their responses, to see if

they have similar opinions on financial literacy topics for underserved individuals. The intent of this report is to evaluate if the outcomes are in agreement with the findings in essay two of this research.

The data that follows is a result of this study:

1. Can financial education and literacy programs assist underserved communities and individuals with their financial decision making?
2. Will knowledge of relevant financial information assist communities that have been marginalized and underserved to become prudent with their finances?

Are the environment and demographics of individuals the driving factors behind individuals purchasing decisions?

### **Overview of the Participants**

Over the course of seven months, I interviewed 12 individuals from a variety of professionals and backgrounds. The participants included federal government employees, corporate financial industry executives, financial advisors, a nonprofit Chief Executive, educators and community leaders (pastor, coach, and author). The geographical location of the participants ranges from urban areas in Washington, DC, and Virginia, to in the inner city of Illinois and Missouri, to rural areas in Alabama and North Carolina.

Table 15 provides an overview of the participants, followed by biographical descriptions. Their professional backgrounds and experiences are shared to give context to their relationship to the study. To protect anonymity, identifiable information of the participants has been removed or slightly revised, and no gender-specific pronouns were utilized.

**Table 15: Participant Demographics**

Participants Demographics				
Participant Number	Position	Career field status	Years of experience	Location
1	Retired Chairperson	Federal Government	30	Washington, DC, VA, MD
2	Director	Federal Government	22	Washington, DC, VA, MD
3	VP	Corporate/ VP	20	Jackson, MS
4	CEO	Corporate/CU CEO	25	Washington, DC
5	CEO/Broker	Financial Advisor	25	Detroit, MI
6	President/CEO	Financial Advisor	15	Dumfries, VA
7	President/CEO	Non Profit	15	Jacksonville, NC
8	Mayor/ Pastor	City/Local	15	North Courtland, AL
9	Retired Educator	City/Local	34	Chicago, IL
10	Author/Community Leader	City/Local	15	Saint Louis, MO
11	Pastor	City/Local/Federal Employee	15	Fairfax, VA
12	Educator/Community Leader	College/Community	10	Pell City, AL

**Participant 1.** This participant is currently a Board member at a major financial institution and has previously been the Chair of a Federal Financial Regulatory Agency and Chief Operations Officer (COO) of a billion dollar financial institution. This participant has numerous years working with organizations that served the underserved and organizations that attempt to improve financial literacy of all citizens.

**Participant 2.** This individual attended Yale University and has been a Director/Senior Executive with a few Federal Agency working primarily in the Office of Consumer Protection and as Deputy Chief Counsel for the House Financial Services Committee. This participant has a wealth of knowledge and experience working with underserved individuals and understanding the protecting individuals has when it comes to purchasing products.

**Participant 3.** This participant is currently a Senior Vice President of a federal credit union in Jackson, Mississippi. The individual has over 20 years working with banks and credit unions.

**Participant 4.** This person is currently the Chief Executive Officer for an international credit union in the Washington, DC area. The participant has over 25 years working in the financial industry primarily with credit unions and banks. This individual experience is unique in that the majority of the customers they served are from the Western Hemispheres and Caribbean countries.

**Participant 5.** This participant is currently the President and Chief Executive Officer of a financial brokerage firm in Southfield, MI (outer edge of Detroit). This individual has over 25 years working as an independent broker and as a license register financial advisor for firms such as Merrill Lynch. This participant has also been an Assistant Vice President and Senior Financial Consultant.

**Participant 6.** This participant is currently a U.S. Army Financial Officer and Comptroller serving the Kansas National Guard. This individual is also the Chief Executive Officer of a financial advisor firm. This participant has over 15 years working in the financial career field.

**Participant 7.** This participant is currently an Adjunct Professor, Community Organizer, retired Army Finance Officer and President of a non-profit organization. This individual has over 15 years working with underserved communities and finance.

**Participant 8.** This participant has been a Mayor and Community Organizer of a small rural underserved city in Alabama for over 15 years. This individual is a pastor and one of the original founders of a male non-profit organization in northern Alabama.

**Participant 9.** This participant is a recently retired school teacher who has taught the majority of their 34 years in social disadvantage locations in Chicago, Illinois.

**Participant 10.** This participant is an author, Community Leader and Little League coach from the JeffVanderLou (JVL) area of Saint Louis, Missouri. This individual has over 15 years working with underserved youth.

**Participant 11.** This participant is a Pastor, federal employee and retired Army Officer from the Washington, DC National Guard. This individual has over 15 years working with underserved communities.

**Participant 12.** This participant is an educator, music and praise leader at a church and a Student Activities Manager at a Community College in Alabama. This individual has over ten years working with communities in underserved area and community college.

### **Common Themes that Emerged from the Data**

Each participant shared and revealed a wealth of knowledge and passion for the topics of financial literacy and working with underserved communities and individuals. While each participant had their thoughts and ways they would go by assisting underserved communities and

people in general, various themes were obtained from the interviews. I chose to focus on the four common themes that appeared consistently throughout the data.

### **Theme One: Defining Financial Literacy**

The majority of the participants utilized different terms when defining financial literacy. However, some statements that emerged when describing financial literacy were made with the caveat that it depends on the audience, what is considered financial literacy for one sector of the community may be regarded as common knowledge to another. There were minor differences between participants who had specialized financial backgrounds and those that did not have specialized experience. There was not a significant difference in opinions in participants from urban locations compared to participants in rural locations. I summarized some of the participants' responses below:

Participant 1, previously was Chair of a Federal Financial regulatory agency (President Appointee), a Chief Operating Officer (COO) of a federal credit union, and a current board member of a financial institution stated:

Financial Literacy is providing people with the skills to make informed decisions about their finances. Believe an individual is a financially literate person when one can make informed financial decisions.

However, participant 12, an educator from a small community college in Alabama stated:

Financial literacy is pretty much how you interpret finance and how you deal with your finances on a day to day basis. It is one understanding of anything along

the lines of finances, whether it may be budgeting, saving or investing. In underserved communities just because we do not do all of that does not change the fact of what the definition is.

Participant 6, a pastor, federal employee, and a retired Army National Guard Officer stated:

I firmly believe individuals must understand the systems in society we are living. I think knowledge is power and ignorance of finance are in every sector of society. I also believe that there are individuals with higher income that are underserved due to them not having knowledge of finance. We do not know what they do not know and need to be informed no matter what our social economic status.

Dr. Jenney E. Cotton (2016) agrees with Participant 6's notions that students or individuals are not aware of what they do not know (p.95). Participants 4 and 7 had similar opinions on the definition of financial literacy; they believe that when a person has acquired a precise amount of financial knowledge and understood how to apply it, only then should an individual be considered financially literate.

### **Theme Two: Financial Education Programs are Necessary**

The most common theme of this research was that all 12 of the participants that were interviewed agreed that financial education program is not only necessary but should be taught in school.

Participant 5, who is a Financial Advisor and own a brokerage firm near Detroit, Michigan stated:

I definitely believe if students or adults participate in a financial literacy program, it will affect their knowledge of how things work and will give individuals an understanding of how they can take what they have learned to improve their financial situation.

A majority of the participants believe that financial education classes should start in elementary school and advance through high school to college. Participants 9 and 12, who are both educators, believe that financial education should be a mandatory topic taught in school.

Participant 3, a Senior Vice President of a Federal Credit Union in the rural south in Mississippi stated:

I believe in teaching and taking the educational program to the communities and schools. Our credit union mantra and belief is we have to meet people where they are. We believe in taking financial literacy programs to our customers and the underserved communities who may need it the most.

### **Theme Three: Creating Meaningful, and Relevant Financial Education**

The relevancy of material taught in financial education program is critical to individual success in learning financial literacy. All 12 of the participants' interviewed agree that the information taught in financial literacy programs should be relevant to the audience who is attending. Participant 10, an author and community leader from the inner city of Saint Louis, Missouri stated:



We do not really discuss money in our hood. If you are talking about money you may get robbed. In order to get people to come out and discuss money, it is all in the packaging. The problem with delivering financial education is you are trying to give people something that is good for them, but they do not realize it is good for them because they never had it. The material must apply to the community, and you must offer or have something to give them.

Depending on the community, the target market must feel they are receiving something besides a lecture or someone telling them they are not managing their money correctly. Participant 3's organization (Federal Credit Union) teaches basic needs versus wants. Participant 4 understands that knowing the audience is critical, as one probably should not focus on teaching a low-income community to save 10 to 20 percent of their earnings when they are barely making ends meet for housing and food. Participant 10 and a majority of the other participants believe exposure is a major contributor to underserved communities and understanding financial literacy. Their beliefs are that most individuals learn better by seeing and experience. Previous research and studies of financial literacy have found that participants have experienced successes with financial education when they are provided timely and relevant information (Cotton, 2016).

#### **Theme Four: Application of Financial Knowledge (Education, Income, and Decision-making)**

Theme four arrives from hypothesis three (H3), which is the expectation that individual characteristics moderate the effect of learning in a financial literacy program on financial knowledge. This theme focuses specifically on an individual's income and an individual's educational level. The majority of the participants believe there will be a positive effect of higher

income and higher educated individuals attending a financial literacy program and believe there will be an increase in financial knowledge. On the other hand, there were a few disparities on this topic.

Participant 5 stated:

I think that education does have a role, but also believes there is a sector of people that it does not matter what they make they will reject the whole idea of having to be financial literate or having to manage their money properly.

Participant 4 stated:

The only difference in underserved individuals and wealthier individuals is the underserved has less money to work with. The habits have to be the same whether a person is in an underserved community or wealthier community, there has to be discipline.

Participants 11 and 12 believe education plays a role, and generational poverty is a major factor on what and how an individual learns. Both participants also agreed that people with higher incomes have more options and access to resources than an individual who may be considered underserved.

Participant 1 stated:

I do not think that low financial literacy level and bad decision making is all inclusive to only low-income and underserved individuals. In my experiences, many people who have high income live paycheck to paycheck and rely on check cashing services. The higher the income does not guarantee individuals will make

sound financial decisions. Higher income individuals seem to have enough income that those bad financial decisions do not appear to have a significant effect due to they have enough money to cover their lifestyles.

## **Key Findings**

The outcomes of the interviews were analyzed for emergent themes and concepts. The findings from this research yielded insight into what policymakers, educators, federal employees, community leaders and financial professionals may deem necessary for improvement or lack regarding financial literacy in formal education.

The results of this study indicate support for the definition of financial literacy, adopted by the President's Advisory Council on Financial Literacy in 2008. This connects financial behavior to financial knowledge over a lifetime of financial well-being. The definition embellishes the majority of areas cover by the participants interviewed. Financial literacy and financial education program should always seek ways to improve and expand programs as corporate America is continuously trying to maximize their profit margins.

The analyses of the interviews and focus group session as it relates to theme two and hypothesis one (H1) share similar beliefs that participation in a financial literacy program has a positive effect on financial knowledge. All participants agreed with the results for (H1) in essay two, and place a particular emphasis on making financial education program mandatory in schools and ensuring all communities have access to financial education.

The outcome from the interview sessions and focus group also agreed with the finding for hypothesis two (H2). The results of the questions from theme three are in concurrence of relevant financial education program. Participants believe the more pertinent and relevant the financial

information is to a particular individual situation, the more attentive an individual will be. The information has to address an individual or community most essential financial challenges and provide a clear path for resolving the issues.

The questions that are related to hypothesis three (H3) and theme four have some differences and displays some mixed results. Therefore, the participants that volunteered for this study did not fully agree with H3. Income and education are not expected to have a main effect, but could potentially have a moderating effect. This is interesting, particularly given the lack of support for H3 in the quantitative research. Future empirical research should include a rethinking of the role of income and education in financial literacy improvement.

In summary, the interviewees all concluded that financial literacy is significant and much needed for everyone, especially the underserved and historically disenfranchised communities. They believe that the information should be relevant and tailored to individuals' specific predicament or their environment. Financial institutions must do a better job with community engagement and building trust in their communities. All agreed financial literacy programs should be mandatory in schools. Federal and state laws will need to assist with funding and to ensure qualified financial professionals are involved in administering the curriculum.

## **Conclusions and Contributions**

The goal of this essay was to offer new insights into the practices of underserved individuals, financial institutions, financial educators, employers, and individuals. The additional understanding could lead to greater opportunities for transformative learning and for increases in financial literacy for people who live in underserved areas. The financial education involved in

the seminars could also assist underserved communities and individuals in their future purchasing decisions.

According to Carpena, Cole, Shapiro, and Zia (2011), financial literacy programs may also affect financial decision making through other channels, for instance by making individuals and households more aware of product choices available to them, equipping them to ask the right questions to financial providers, encouraging them to seek professional and personalized financial advice, changing their attitudes towards purchasing, and recommending formal financial products and services.

Additional methods, training, and research are needed to develop relevant programs to assist the underserved to become financially literate. It is through more research, and through providing access to those from modest means that we can develop relevant and efficient training. The ultimate goal remains to enhance the quality and knowledge of financial literacy for everyone. To have community leaders, states legislatures, federal government officials, and major corporations work together to provide the necessary support for providing financial and life skills training to less fortunate individuals and families would be an enormous achievement.

## **Implications**

Leaders in urban and rural underserved areas recognized the need for increased financial literacy training for their residence. However, they have failed to identify resources, the most effective methods, qualified instructors, and they require assistance with communicating the message. With limited research about the effectiveness of informing underserved and lower income individuals on the benefits of understanding their finances, this research could assist in developing a path to reach the unbanked, underserved and financial challenge segments.

Community and religious leaders must be part of the process to communicate the benefits of financial literacy. We need school boards and major corporations to also take a stand to educate the kids and their employees. There is a significant stigma in underserved communities around financial education, this is a very private and personal topics and is one of the greatest obstacles. Individuals must trust you before they will receive what you are telling them. A rapport must be established instantaneously with the audience for training to be successful. The individual or individuals presenting or organizing the training must be someone that can engage and relate to the public everyday financial matters. The information must also be relevant and timely. For there to be an increase in financial literacy programs in underserved areas the federal government must have buy-in and make an intentional effort to enforce the Community Reinvest Act (CRA), fund legitimate financial literacy companies that support specific initiatives and measures set by an independent governing financial literacy board. The most important initiatives that should be implemented are for mandatory financial education curriculum be developed and taught in all schools and universities. We must find a way to make learning about finance fun.

## CONCLUSION

Over the last two decades, policy makers and congressional leaders have commissioned multiple studies on financial literacy. Most recently, in 2009, President Obama signed the Wall Street Reform and Consumer Protection Act, which, among other things, created the Consumer Financial Protection Bureau (CFPB) (Richardson, 2013). This bureau has assisted with multiple studies focusing on how to protect and educate consumers. The majority of financial education research efforts have been directed toward high schools. However, in the last five to ten years, the focus has shifted to colleges and universities, due to the increase in student loan debt. Student loans are a major issue in some households.

However, in underserved communities, the financial decision making problems are more basic than college debt. High school education is not even a given. Families in underserved communities struggle to get by on a daily basis and can be crippled by bad financial decision making. It is this context that motivated this study on the underserved in urban and rural environments. The underserved segment of society is strongly affected by the lack of financial knowledge and by making poor financial choices.

The three essays of this dissertation, when taken together, add to the body of knowledge of financial literacy and financial behavior. This study explored and re-examined the construct of financial literacy, it reviewed relevant past research and presented a conceptual model with hypotheses regarding factors that affect financial literacy. The study also reveals methods and exposed barriers that may need to be removed from specific areas of society to educate and develop prudent citizens.

## **Limitations of the Research**

This research was intended to be exploratory and as comprehensive as possible in reviewing financial behaviors and the decision making process of underserved individuals. In almost any study there will naturally be some limitations. One boundary of this study appeared in the routine data collection process.

The objective was to acquire a diverse sampling of underserved individuals across the United States, this was obtained, but a real diversity of race was challenging to obtain. The makeup of the participants is 87.1% Black, 8.9% White and 3.2% Latino. A future study should consider examining if there are significant differences between underserved individuals financial decision-making process and race. It should also be noted that all of the financial seminars were held at black churches or religious centers. Therefore, the themes and theories that emerged from the data may not apply to non-church goers or to other residents who live outside of the area. A larger sample and a more geographically diverse sample would also be beneficial.

It should also be noted that as the researcher in essay two, I developed the presentation, presented the financial seminar and analyzed the data. Therefore the effectiveness of the educational seminar, particularly when one is delivering something hands-on like financial literacy training, may depend on how the training is delivered and the quality of the instructor. Thus, the characteristics of the instructor could be taken into account in future research.. Future research should seek to expand the study of the effectiveness of an instructor on the outcome of individual learning financial topics. Another limitation of this study is that although the qualitative analysis was conducted in a systematic way, the results can always be open to multiple interpretations. The diversity of opinions within the sample of experts is another area



that raises questions about the nature of expertise, and the degree of understanding that experts hold about the financial needs of the underserved.

### **Recommendations for Future Research**

While conducting this research, there were multiple other areas that could have been pursued, given sufficient time and resources. An area that future researchers should consider placing particular emphasis on is the exploration of the criteria that federal agencies and lawmakers use to authorize funding for financial literacy programs. Lawmakers should consider a study that explores establishing a standard level of competency for financial educators. More insight is also needed into the reasons that policymakers differ in their views on mandating financial education in schools, colleges, and underserved communities.

While this research focused on underserved individuals and communities and their decision-making process, a follow-up study could explore the connection between the availability of financial education programs in underserved communities, and the level of presence and activity of traditional financial institutions and the financial entities that have been known to prey on the underserved markets. For example, data could be collected and analyzed comparing the average availability and distance to traditional financial institutions in these markets, compared to the availability and distance to pawn shops, car title stores, payday lenders, and check-cashing type businesses.

More broadly, this research originated from a personal passion I acquired for teaching the underserved about consumer finance. I saw the benefits to members of the Armed Services and their families when I worked as a banking officer for financial institutions overseas. The findings from the dissertation validate some of my prior convictions and opened my eyes to new ideas

and new ways of looking at the problems. The findings indicate that participation in a financial literacy seminar has a positive effect on financial knowledge, and the more relevant the financial knowledge taught in financial literacy programs, the more the positive effects of participation in the program on financial knowledge increase. However, gains in knowledge are inconsistent and might be temporary, so there is considerable scope for improvement. This research has revealed a few recommendations that should be considered to ease the destigmatization of the topic of personal finance. There should be an environment and atmosphere for frequent exposure to financial information. This means that financial program should be local and relevant to the participant's situations. There should be appropriate teaching material for low-income or underserved people. Financial literacy must be treated as a long-term and constant process. Federal and State policies should look into providing incentives to low-income people, as the earned income credit (EITC) has been used more for middle and upper-income individuals. The federal regulators should consider a thorough review of the Community Reinvestment Act (CRA), specifically look into how the program affects underserved areas.

In conclusion, financial education is necessary, but it is not the sole solution for reducing poverty. The great news is there is evidence that relevant financial education can improve financial literacy and assist in changing financial behavior. The challenge is that there is considerable more work to be done. I am hopeful that this research has the potential to inform policymakers, politicians, and employers that having financially informed citizens, employees, and communities can potentially improve the financial and moral health of our organizations, cities, and rural communities.

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## Appendix A - Financial Literacy Pre-Test

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. Exactly \$102
  - C. Less than \$102
  
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - A. More than today
  - B. Exactly the same
  - C. Less than today
  
3. If interest rates rise, what will typically happen to bond prices?
  - A. They will rise
  - B. They will fall
  - C. They will stay the same
  - D. There is no relationship between bond prices and the interest rate
  
4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less.
  - A. True
  - B. False
  
5. Buying a single company's stock usually provides a safer return than a stock mutual fund.
  - A. True
  - B. False



## Appendix B - Financial Literacy Post-Test

### Everyday Financial Matters:

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. Exactly \$102
  - C. Less than \$102
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - A. More than today
  - B. Exactly the same
  - C. Less than today
3. If interest rates rise, what will typically happen to bond prices?
  - A. They will rise
  - B. They will fall
  - C. They will stay the same
4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.
  - A. True
  - B. False
5. Buying a single company's stock usually, provides a safer return than a stock mutual fund.
  - A. True
  - B. False

## Appendix B - Financial Literacy Post-Test

6. What is the difference between a bank and a credit union?
- A. A bank has board members that are paid, while a credit union has board members that are volunteers
  - B. A bank has lower interest rates for loans
  - C. A credit union does not insure your funds for the same amount a Bank does
7. Suppose over the next 10 years the prices of the things you buy double. If your income also doubles, will you be able to buy more than you can buy today, the same as you can buy today, or less than you can buy today?
- A. More
  - B. The same
  - C. Less
8. Suppose you need to borrow 100 US dollars. Which is the lower amount to pay back: 105 US dollars or 100 US dollars plus 3%?
- A. \$105
  - B. \$100 plus 3%
9. Suppose you had 100 US dollars in a savings account and the bank adds 10% per year to the account. How much money would you have in the account after five years if you did not remove any money from the account?
- A. More than \$150
  - B. Exactly \$150
  - C. Less than \$150
10. The maximum social security benefit in 2015 is how much?
- A. \$2,533/month
  - B. \$2,771/month
  - C. \$3,576/month
  - D. It depends on what age you are when you retire?

## Appendix B - Financial Literacy Post- Test (cont.)

11. What is the most that an employee would pay in Social Security taxes in 2015/2016?
  - A. \$5,100
  - B. \$3,950
  - C. \$118,500
  - D. \$7,049
  
12. Suppose you file for an extension on your tax return and get the normal six months, until Oct. 15. Does this also give you an extension on paying your taxes?
  - A. Yes
  - B. No
  
13. Which is worth more to a taxpayer?
  - A. A \$2,500 tax credit
  - B. A \$2,500 tax deduction
  
14. Can a working person be eligible for the federal Earned Income Tax Credit even if they don't have any children?
  - A. Yes
  - B. No
  
15. Suppose you have some money. Is it safer to put your money into one business or investment, or to put your money into multiple businesses or investments?
  - A. One business or investment
  - B. Multiple businesses or investments
  - C. Equally safe

## Appendix C - Demographics Survey

### Adult Financial Literacy

1. What is your Gender? (Circle one) Male      Female
2. Year of Birth: \_\_\_\_\_
3. Zip Code or City you reside: \_\_\_\_\_
4. Race (Ethnicity origin):  
 Asia / Pacific Islander  
 Black  
 Hispanic  
 Native American or American Indian  
 White  
 Other (2 races or more)
5. What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.  
 No schooling completed  
 Elementary to 8<sup>th</sup> grade  
 Some high School, no diploma  
 High School graduate, diploma or the equivalent (for example: GED)  
 Trade/Technical/Vocational Training  
 Associate degree  
 Bachelor's degree  
 Master's degree  
 Professional degree  
 Doctorate degree

**Appendix C - Demographics Survey cont.**

6. What is your marital status?

- Single never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

7. Please indicate your employment status:

- |                                                     |                                         |
|-----------------------------------------------------|-----------------------------------------|
| <input type="checkbox"/> Employed                   | <input type="checkbox"/> Self-employed  |
| <input type="checkbox"/> Unemployed                 | <input type="checkbox"/> Military       |
| <input type="checkbox"/> Student/Part-time Employed | <input type="checkbox"/> A homemaker    |
| <input type="checkbox"/> Retired                    | <input type="checkbox"/> unable to work |

8. Please mark an X near your annual income range:

- |                                               |                                               |
|-----------------------------------------------|-----------------------------------------------|
| <input type="checkbox"/> \$0 to \$5,000       | <input type="checkbox"/> \$5,001 to \$10,000  |
| <input type="checkbox"/> \$10,001 to \$15,000 | <input type="checkbox"/> \$15,001 to \$20,000 |
| <input type="checkbox"/> \$20,001 to \$25,000 | <input type="checkbox"/> \$25,001 to \$30,000 |
| <input type="checkbox"/> \$30,001 to \$35,000 | <input type="checkbox"/> \$35,001 - \$40,000  |
| <input type="checkbox"/> \$40,001 to \$50,000 | <input type="checkbox"/> \$50,001 - \$60,000  |
| <input type="checkbox"/> \$60,001 to \$70,000 | <input type="checkbox"/> \$70,001 - \$80,000  |
| <input type="checkbox"/> \$80,001 to \$90,000 | <input type="checkbox"/> \$90,000 - \$100,000 |
| <input type="checkbox"/> \$100,001 or more    |                                               |

9. Rent or Own home (circle one)

## Appendix D – Schedule of Seminars

### Financial Literacy Seminar

<b>Unit</b>	<b>Time (minutes)</b>
Saving/Budgeting	15
Banking (Credit Union vs Bank)	17
Compound Interest/Rule of 72	13
Credit and FICO scores	18
Taxes (Investing)	12
Total training	75
Breaks and drawings	15
Total time of Session	90

## Appendix E – Revised Financial Literacy Pre-Test

1. Which usually has the highest interest rate for a short-term loan of 30 days or less?
  - A. Payday Loan
  - B. Credit Card Cash Advance
  - C. Bank or Credit Union
  - D. Pawn Shop
- 1a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
  
2. Which of the following statements best describes your right to check your credit history for accuracy?
  - A. You can only check your record for free if you are turned down for credit based on a credit report.
  - B. Your credit record can be checked once a year for free.
  - C. All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders.
- 2a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
  
3. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. More than \$110
  - C. Less than \$102
- 3a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

4. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?  
A. More than today

B. Exactly the same

C. Less than today

4a. on a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

5. Which is worth more to a taxpayer?

A. \$2,500 tax credit    B. \$2,500 tax deduction

5a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

6. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less.

A. True                      B. False

6a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

7. Buying a single company's stock usually provides a safer return than a stock mutual fund.

A. True                      B. False

7a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7



8. What is the difference between a bank and a credit union?
- A. A bank has board members that are paid, while a credit union has board members that are volunteers
  - B. A bank has lower interest rates for loans
  - C. A credit union does not insure your funds for the same amount a bank does
- 8a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

## Appendix F – Revised Financial Literacy Post-Test

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. More than \$110
  - C. Less than \$102
  
- 1a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
  
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - A. More than today
  - B. Exactly the same
  - C. Less than today
  
- 2a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
  
3. Which is worth more to a taxpayer?
  - A. A \$2,500 tax credit
  - B. A \$2,500 tax deduction
  
- 3a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
  
4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less.
  - A. True
  - B. False
  
- 4a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

5. Buying a single company's stock usually provides a safer return than a stock mutual fund.  
A. True                                          B. False
- 5a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
6. What is the difference between a bank and a credit union?
- A. A bank has board members that are paid, while a credit union has board members that are volunteers
  - B. A bank has lower interest rates for loans
  - C. A credit union does not insure your funds for the same amount a Bank does
- 6a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7
7. Which usually has the highest interest rate for a short term loan of 30 days or less?
- A. Payday Loan
  - B. Credit Card Cash Advance
  - C. Bank or Credit Union
  - D. Pawn Shop
- 7a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

8. Which of the following statements best describes your right to check your credit history for accuracy?
- A. You can only check your record for free if you are turned down for credit based on a credit report.
  - B. Your credit record can be checked once a year for free.
  - C. All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders.
- 8a. On a scale of 1=not at all confident to 7=highly confident, how confident are you in your answer? (Circle your answer) 1 2 3 4 5 6 7

**Appendix G - Demographics Survey (Revised)**

1. What is your Gender? (Circle one) Male Female Other

2. Year of Birth: \_\_\_\_\_

3. Zip Code or City you reside: \_\_\_\_\_

4. Check all Races that apply:

Asian

Black or African American

Native Hawaiian or Other Pacific Islander

White

American Indian or Alaska Native

Other (2 races or more)

5. Are you Spanish/Hispanic/Latino decent? Please check Yes or No

Yes  No

6. What is the highest degree or level of school you have completed? If currently enrolled, highest degree received.

No schooling completed

Elementary to 8th grade

Some High School, no diploma

High School graduate, diploma or the equivalent (for example: GED)

Trade/Technical/Vocational Training

Associate degree

Bachelor's degree

Master's degree

Professional degree

Doctorate degree

7. What is your marital status?

Single

Married or domestic partnership

8. What is your current employment status?

Full time employment

Part time employment U

Unemployed/Looking for work

Unemployed/Not looking for work

Student

Retired

Other, please specify \_\_\_\_\_

9. Please mark an X near your annual individual income range:

\$0 to \$5,000

\$35,001 to \$40,000

\$5,001 to \$10,000

\$40,001 to \$50,000

\$10,001 to \$15,000

\$50,001 to \$60,000

\$15,001 to \$20,000

\$60,001 - \$70,000

\$20,001 to \$25,000

\$70,001 - \$80,000

\$25,001 to \$30,000

\$80,001 - \$90,000

\$30,001 to \$35,000

\$90,001 - \$100,000

\$100,001 or more

10. Do you: Rent or Own your home? (Circle one)

## Appendix H – Financial Relevancy - Saint Louis, MO - Focus Group

### Financial Relevancy Survey

#### Instructions:

In this survey, you will be asked to read 8 questions about financial literacy and to rate the topic's relevance to you and your community. Please follow the instructions below and answer the questions to the best of your ability.

Using the scale numbers below each question, please circle the number that best reflects the relevance of the topic associated with the question.

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. More than \$110
  - C. Less than \$102

The topic in this question is about saving and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - A. More than today
  - B. Exactly the same
  - C. Less than today

The topic in this question is saving and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

3. Which is worth more to a taxpayer?

A. \$2,500 tax credit

B. \$2,500 tax deduction

The topic in this question is on taxes.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1      2      3      4      5      6      7

4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less. (True or False question)

The topic in this question is borrowing and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1      2      3      4      5      6      7

5. Buying a single company's stock usually provides a safer return than a stock mutual fund.

(True or False question)

The topic in this question is investment.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1      2      3      4      5      6      7



6. What is the difference between a bank and a credit union?
- A. A bank has board members that are paid, while a credit union has board members that are volunteers
  - B. A bank has lower interest rates for loans
  - C. A credit union does not insure your funds for the same amount a bank does

The topic in this question is financial institutions.

(Circle your answer below)

Not at all Relevant				Extremely Relevant		
1	2	3	4	5	6	7

7. Which usually has the highest interest rate for a short-term loan of 30 days or less?
- A. Payday Loan
  - B. Credit Card Cash Advance
  - C. Bank or Credit Union
  - D. Pawn Shop

The topic in this question is borrowing and interest rates.

(Circle your answer below)

Not at all Relevant				Extremely Relevant		
1	2	3	4	5	6	7

8. Which of the following statements best describes your right to check your credit history for accuracy?
- A. You can only check your record for free if you are turned down for credit based on a credit report.
  - B. Your credit record can be checked once a year for free.
  - C. All credit records are the property of the U.S. Government and access is only available to the FBI and lenders.

The topic in this question is financial knowledge of credit reports.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1      2      3      4      5      6      7

THANK YOU FOR YOUR PARTICIPATION. IT IS GREATLY APPRECIATED.

## Appendix I – Financial Relevancy – Financial Expert

### Financial Relevancy Survey For Financial Experts

#### Instructions:

In this survey, you will be asked to read 8 questions about financial literacy and to rate the topic's relevance as if you are someone designated as low-income or are someone who lives in an underserved/social disadvantaged area. Please follow the instructions below and answer the questions to the best of your ability.

Using the scale numbers below each question, please circle the number that best reflects the relevance of the topic associated with the question.

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?
  - A. More than \$102
  - B. More than \$110
  - C. Less than \$102

The topic in this question is saving and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?
  - A. More than today
  - B. Exactly the same
  - C. Less than today

The topic in this question is saving and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

3. Which is worth more to a taxpayer?

- A. \$2,500 tax credit    B. \$2,500 tax deduction

The topic in this question is taxes.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest paid over the life of the loan will be less. (True or False question)

- A. True                      B. False

The topic in this question is borrowing and interest rates.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

5. Buying a single company's stock usually provides a safer return than a stock mutual fund.

(True or False question)

The topic in this question is investment.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1    2    3    4    5    6    7

6. What is the difference between a bank and a credit union?
- A. A bank has board members that are paid, while a credit union has board members that are volunteers
  - B. A bank has lower interest rates for loans
  - C. A credit union does not insure your funds for the same amount a bank does

The topic in this question is financial institutions.

(Circle your answer below)

Not at all Relevant	Extremely Relevant
1    2    3    4    5    6    7	

7. Which usually has the highest interest rate for a short-term loan of 30 days or less?
- A. Payday Loan
  - B. Credit Card Cash Advance
  - C. Bank or Credit Union
  - D. Pawn Shop

The topic in this question is borrowing and interest rates.

(Circle your answer below)

Not at all Relevant	Extremely Relevant
1    2    3    4    5    6    7	

8. Which of the following statements best describes your right to check your credit history for accuracy?
- A. You can only check your record for free if you are turned down for credit based on a credit report.
  - B. Your credit record can be checked once a year for free.
  - C. All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders.

The topic in this question is credit reports.

(Circle your answer below)

Not at all Relevant

Extremely Relevant

1      2      3      4      5      6      7

THANK YOU FOR YOUR PARTICIPATION. IT IS GREATLY APPRECIATED.

## **Appendix J. Interview Questions for Financial Literacy Research**

1. How would you define financial literacy?
2. What does the term “underserved community” mean to you?
3. What do you think contributes most to today’s lack of financial literacy in underserved communities?
  - 3a. What policies or regulations do you feel have been most significant for underserved individuals and communities?
  - 3b. What do you think financial institution (Banks and Credit Unions) could do better to assist underserved individuals to become more aware of their finances?
4. How do you see the connection between financial education and financial knowledge?
  - 4a. From your experience, how can financial education programs improve?
  - 4b. What are your thoughts on the relevance of the information being taught in financial literacy programs?
  - 4c. One of my hypotheses is that “Participation in a financial literacy program has a positive effect on financial knowledge.” What are your thoughts on this hypothesis?
5. What do you see as the link between financial knowledge and financial decision making?
6. What particular problems do persons in underserved communities have with their financial decision making that persons in wealthier communities do not have?
7. What do you think are some important factors that individuals in underserved communities need to know about financial decision making?

8. How do income levels and education levels affect financial decision making and purchase decisions?
9. How do culture, religion, and race affect financial decision making?
10. What do you see as the relationship between an individual's financial decision making and overall financial success?
11. What do you think are additional factors that may prohibit individuals from learning about finance?
12. What did I not cover that you would like to add to this topic?



## **Appendix K. Interview Request Permission Form**

**Ask to obtain permission in writing to quote the respondents, to cut-and-paste e-mail responses they write, or to use a tape-recorder during the session if you will be doing any of these activities.**

### **Request to Interview Form:**

"I Mr./Ms. \_\_\_\_\_ hereby give my permission for Dennis Martin to interview me and quote my responses in a scholarly research paper. I understand that this research paper will be submitted to a professor at Temple University. I understand that I waive any claim to copyright to this material should the student ever publish it in a scholarly journal or in electronic format online. I understand that the author [will/will not] maintain my anonymity as a part of this interview. I hereby give my permission in the form of my signature below."

Signature \_\_\_\_\_ Date \_\_\_\_\_

## Appendix L. Institutional Review Board Approval Form

Temple IRB Approved

07/25/2016

***Title of Research: Financial Literacy and the Financial Decision Making of Individuals in Underserved Communities***

***Investigator and Department: Temple University, Fox School Business, DBA program***

### ***Why am I being invited to take part in this research?***

We invite you to take part in a research study because the research focuses on individuals in underserved areas.

### ***What should I know about this research?***

- Dennis Martin will explain this research to you.
- Whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide.

### ***Who can I talk to about this research?***

If you have questions, concerns, or complaints, or think the research has hurt you, contact the research team at Dennis Martin P.O. Box 2784 Woodbridge, VA 22195, [dennis.martin@temple.edu](mailto:dennis.martin@temple.edu), (703) 232-4685.

This research has been reviewed and approved by an Institutional Review Board. You may talk to them at (215) 707-3390 or e-mail them at: [irb@temple.edu](mailto:irb@temple.edu) for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

## ***Why is this research being done?***

The purpose of this mixed method (qualitative and quantitative) research study is to examine how financial literacy is related to financial decision making, and the moderating effects of consumer characteristics such as income and culture and other situational factors. The objective is to reveal if there is a significant difference in how the relevancy of financial information affects the quality of financial decisions, and how that relationship is affected by consumer characteristics including demographics. Sample hypotheses that will be tested in this field experiment include:

H1: The more relevant the financial knowledge taught in financial literacy programs, the more positive effect the training will have on financial decision-making

H2: The economic (income) environment and culture of individuals influence the consumer (individual) financial decision-making process

## ***How long will I be in this research?***

We expect that you will be in this research for two Hours.

## ***What happens if I agree to be in this research?***

These studies will take place in several locations. Possible locations include Maysville, North Carolina; North Courtland, Alabama; Northern Virginia; Washington, D.C.; Baltimore, Maryland; Philadelphia, Pennsylvania; and St. Louis, Missouri. The facilities that will be used will be churches, community centers, gyms, schools or other public buildings. All participants will be over the age of 18. The potential subjects will be mostly minorities from underserved areas. Not all participants will be considered low income, but may work, live, or worship in an underserved area.

Each subject will be brief and given a copy of a consent form that will explain the protocol and their study-related duties and functions. The agenda will cover the sequence of events for this study.

## ***What happens to the information collected for this research?***

To the extent allowed by law, we limit the viewing of your personal information to people who have to review it. We cannot promise complete secrecy. The IRB, Temple University, Temple University Health System, Inc. and its affiliates, and other representatives of these organizations may inspect and copy your information.

**Will being in this research help me in any way? We cannot promise any benefits to you or others from taking part in this research. However, possible benefits include a better understanding of issues related to financial literacy.**

## Appendix M. Interview Questions Correlation to Research

Research Question & Hypothesis	Question(s) Hypothesis
1. Can financial education and literacy programs assist underserved communities and individuals personal financial decision making?	4, 4a, 4b
2. Will knowledge of relevant financial information assist communities that have been marginalize underserved to become prudent with their finances?	5, 5a, 5b
3. Are the environment and demographics of individuals the driving factors behind individuals purchasing decisions?	6,7, 8
H1: Participation in a financial literacy program has a positive effect on financial knowledge.	4, 5c, 6
H2: The more relevant the financial knowledge taught in financial literacy programs, the more the positive effects of participation in the program on financial knowledge increase.	5, 5a, 5b
H3: Individual characteristics moderate the effect of learning in a financial literacy program on financial knowledge.	9, 10, 11,12
H3a: The higher the individual's income, the more positive the effect of participation in a financial literacy program on financial knowledge.	9, 11
H3b: The higher the individual's educational level, the more positive the effect of participation in a financial program on financial knowledge.	9, 11 9, 11
Anfara Jr, V. A., Brown, K. M., & Mangione, T. L. (2002). Qualitative analysis on stage: Making the research process more public. <i>Educational researcher</i> , 31(7), 28-38.	