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Financial Literacy and Women: Overcoming the Barriers

Melissa A. Donohue
University of Massachusetts Amherst, madonohu@educ.umass.edu

FINANCIAL LITERACY AND WOMEN: A MIXED METHOD STUDY OF CHALLENGES AND NEEDS

A Dissertation Presented

by

MELISSA DONOHUE

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Approved as to style and content by:

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Joseph B. Berger, Chair

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Mahnaz Mahdavi, Member

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Kathryn A. McDermott, Member

____
Christine B. McCormick, Dean
School of Education

To Molly

ABSTRACT

FINANCIAL LITERACY AND WOMEN: A MIXED METHOD STUDY OF CHALLENGES AND NEEDS

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MELISSA DONOHUE, B.A., OBERLIN COLLEGE

M.I.A., COLUMBIA UNIVERSITY

Ed.D., UNIVERSITY OF MASSACHUSETTS AMHERST

Directed by: Professor Joseph B. Berger

Women are facing increasing financial responsibility, while at the same time, the consumer financial world is evolving at an extraordinary pace. These trends make a imperative that we better understand the evolving nature of gender-based inequities across our current socio-economic systems and intentionally examine those areas that are most essential in accelerating the narrowing of these gaps. The results of the study indicate that the assumption can on longer be made that women simply need better financial knowledge in order to reach a certain level of financial behavior, without increased access to capital. This study shows that the re-examination of a key component of financial literacy is necessary: the idea that financial knowledge leads to responsible financial behavior, and that responsible financial behavior is a result of financial knowledge. This finding may indicate that women have different dispositions regarding how they use the financial resources, knowledge, and skills that they have acquired.

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CHAPTER 1

THE NEED FOR AN EXAMINATION OF WOMEN'S FINANCIAL KNOWLEDGE

Introduction

Women's roles and responsibilities in U.S. society have undergone a tremendous evolution in the last fifty years. Increasing numbers of women have entered the U.S. workforce in the past few decades, with approximately 40% of women in the civilian workforce in 1970 compared with almost 60% in 2007 (U.S. Bureau of Labor Statistics, 2008). In the same period, the number of married-couple families has fallen to 50% in 2007 from 71% in 1970, while the number of families maintained by women has risen to 12% of the total in 2007 from 9% in 1970 (U.S. Census Bureau, 2008). This 33% increase in female-headed family households means that women are increasingly responsible as the family providers for generating income and managing family finances. At the same time that women are increasingly the primary breadwinner in the family, they also often have primary responsibility for the care of children (Heintz & Folbre, 2000). Women still earn less than men, but the wage gap is narrowing. Women on average live five to ten years longer than men, but have less lifetime earnings—and retirement savings—to show for it (Lusardi & Mitchell, 2005). It is clear that despite the financial gains made by women and their increasingly significant financial role, there is still a great deal of economic gender inequity.

While women struggle to catch up financially, the consumer financial world is evolving at an extraordinary pace. The last few decades have seen a boom in consumer financial products due to technology and financial development, the popular access to financial markets, and the breakdown of regulatory barriers in the banking sector. These trends make it imperative that we better understand the evolving nature of gender-based inequities across our current socio-economic systems and intentionally examine those areas that are most essential in accelerating the narrowing of these gaps.

While women's financial responsibility is increasing, there is evidence that women's financial literacy is not keeping pace. Challenges to women's financial comprehension include discrimination against women in the home, workplace, and financial sector; a fairly recent history of regulatory prevention of women's independent credit availability; and a lack of a working knowledge of basic financial principles, and how to navigate through financial life (Heinz & Folbre, 2000; Secor, 2008; Willis, 2008; Lusardi & Mitchell, 2005; OECD, 2005).

Historically, American women have had limited legal rights in the financial spectrum in terms of owning land, having access to credit independent of their husbands, and even having equal opportunity to join the workforce. Currently, however, some progress has been made by women in the United States, as they are just as likely as men to use a credit card, and just as able to apply for and receive a loan or mortgage (Secor, 2008). The education level of women in the workforce has also risen dramatically since 1970, with 35% of working women holding college degrees in 2007, compared with 11% in 1970 (U.S. Bureau of Labor Statistics, 2008). Additionally, women are holding jobs with greater areas of responsibility, holding about 51% of management, professional, and related jobs in 2007, which surpassed their 46% share of overall workers (U.S. Bureau of Labor Statistics, 2008).

While women's recent ability to independently access credit and other financial instruments, and reach higher levels of education and professional achievement, can be viewed as surmounting a discriminatory financial barrier, the plethora of available credit products require at a minimum a basic understanding of finance, and more likely a financial savvy and sophistication to see through emotionally charged marketing techniques and predatory lending practices (Willis, 2008). Single women have also been among the fastest growing group of homeowners in recent years, according to the Harvard Joint Center for Housing Studies (Drew, 2006). This gender-specific home-ownership trend is laudable as an opportunity to help women close the wealth gap with men that continues to plague this country despite the many economic advances American women have made in the last century.

However, women are also now one of the groups most severely affected by mortgage foreclosures, according to the Center for Responsible Lending (CRL). Of the total projected 2.4 million foreclosures in 2009, and nine million foreclosures expected over the next four years, the CRL forecasts that one third will be foreclosures of mortgages belonging to women. Additional research shows that one of the causes of the current female foreclosure trend could be the disproportionate number of sub-prime mortgages awarded to women. For example, though women and men have roughly the same credit scores, the Consumer Federation of America found that women were 32% more likely to receive sub-prime loans than men (Center for Responsible Lending, 2009). In another study, the National Community Reinvestment Coalition found that women received 30% of high-cost home loans in 2007, compared with just 23% of prime loans, 5% less than that of 2005 (The National Council for Research on Women, 2005).

Why is it that after achieving the high level of economic success that allows independent home ownership, are women more likely than men to have higher risks with obtaining a home loan? Why is it that while women play larger roles in colleges, graduate schools, in boardrooms, and in government offices, that they are more at the mercy of predatory lenders than are men? One potentially important answer is the lack of financial literacy that continues to plague women despite a slew of positive structural changes in our society.

Clearly, government policy, regulations, and enforcement have a role to play in ensuring that all people have access to economic security. Government regulations can work to prevent financial fraud, and prevent the harm that can result from the information asymmetry that can exist between consumers and financial professionals. However, policy response in the financial world can be reactive. Because financial instruments are evolving so quickly and becoming increasingly complicated, government regulators can fail to be proactive in preventing financial products and behaviors that hurt consumers. It is difficult to protect citizens before the financial crisis has hit, especially if the general population is riding the wave of economic strength and bounty. For example, after the *dot-com* market bubble of the late 1990s, the government enacted the Sarbanes-Oxley Act of 2002 to improve the financial reporting and disclosure and general corporate governance of major corporations (Sarbanes-Oxley, 2009). However, the enactment of the law followed corporate behavior that hurt stockholders, and was not a pre-emptive action (Glassman, 2002). Because of political views within the government that can favor the inadequate regulation of markets, as well as the difficulty in general in predicting financial crises, the U.S government cannot always be depended upon to play the role of citizen protector in the financial markets.

However, in a free-market society where *caveat emptor* is still an accepted philosophy in financial markets, one vital form of protection is knowledge and the government can have an impact in helping to provide enhanced financial knowledge through education. While financial knowledge is only part of a solution that also requires government policy-making and ongoing regulatory reform and enhancement, that knowledge can provide a basis for individuals to be able to manage their money and advocate for themselves in financial situations. Additionally, financial knowledge can help provide individuals with an understanding that may affect the support they provide for different types of financial governance and policy-making. In this way, government policy in terms of improved financial education is critical, especially for groups who are less financially literate.

In examining individual financial understanding, women have been found to be less financially literate than men at the college level. A 2005 random survey of college student credit card use conducted by the Smith College Center for Women and Financial Independence assessed students' financial knowledge based on responses to nine questions (Mahdavi & Lewis, 2005). According to the survey, women scored lower on financial knowledge. The survey also found that female and male students used credit cards differently. In possession of more credit cards, women were more likely than men to have credit card debt over $5,000, pay late, and not pay their balances in full.

As adults, that trend seems to continue with women engaging in less financially literate behavior. While women tend to outlive men by 5-10 years, they save less for retirement than men. Although women are steadily climbing the corporate ladder, they remain less confident investors than men (Rosenwald, 2008). A trend like increased women's home ownership is one to celebrate in the face of so much apparent female financial insecurity. But the higher foreclosure rate for women does not bode well for the potential wealth creation that could result from paying off a mortgage. So while women have been legislated equal rights to the financial world, numerous studies indicate that women do not have equal financial knowledge.

Women's economic security is on U.S. policymakers' agendas. President Obama has highlighted women's economic security as one of the primary goals of the newly created White House Council on Women and Girls (Swarns, 2009). Upon closer inspection, however, we find that some of the behaviors that plagued women in the sub-prime mortgage crisis may be a result of a lack of women's financial understanding. In turn, these behaviors could also be a factor in hindering women's economic security in a broader sense.

Research has demonstrated a link between financial knowledge and responsible financial behavior (Hilgert, Hogarth, & Beverly, 2003; Lusardi & Mitchell, 2007; Calvet, Campbell, and Sodini, 2005: and Van Rooji, Lusardi, and Alessie, 2007). What women may be lacking is a firm financial education that will give them the tools and the savvy to continue to build the wealth they need to adequately support themselves, their families, and their communities.

Purpose of the Study

Given the importance of financial literacy as a key piece of the economic equity puzzle, and the link between financial knowledge and knowledge-based financial behavior, this study proposes an in-depth examination of the financial topics that women may need a stronger understanding of, given their current role and responsibilities in families and society. It will include the recommendation of a subset of financial topics of which women need a greater understanding. The study will not explore how to implement those topics and content into effective curricula.

Research Questions

The following primary question and three sub-questions will form the basis of the research proposed in this study:

What knowledge do American women need to make better financial decisions?

a. What financial topics do women struggle with most, as demonstrated through financial literacy surveys?
b. What are common financial problems for women, as demonstrated through different financial behaviors?
c. What financial knowledge do American women report they need?

Significance of the Study

It is clear that there are many potential relationships and areas of exploration in this field. Looking at knowledge is a starting point that could lead to further exploration of different avenues. In other words, it is one piece of the puzzle. Examining financial knowledge issues is a way to begin to approach an area that is far too large for any one study, but rather is worthy of a body of work.

The significance of this study is underscored by two audiences: those who will find the research of value, and those who will benefit from the research.

Who Will Find the Research of Value?

According to the National Council on Economic Education (2007), 21 states included personal finance in their educational standards in 1998, with an increase to 40 states' inclusion in 2007. Some nine states required high school courses to be offered in

2007 (NCEE, 2007). As these programs continue to increase, high school educators who are required to provide financial education curriculum would benefit from research on relevant and necessary financial content for financial education programs. Additionally, educators who are developing and offering financial education curricula would also benefit from an understanding of the unique position of women's need for and understanding of personal finance in order to create programs with depth and long-term impact for both genders.

There is an assortment of other types of providers of financial education as well, including community-based organizations, cooperative extension services, employers, the military, community colleges, and faith-based groups (Vitt et al. 2000). The variety in scope and demographics means that Americans of all ages and all walks of life are receiving access to financial education. These education providers will also benefit from research that explores necessary topics for effective financial education. Groups that provide financial education resources for women and girls in particular will benefit from findings about the financial knowledge that women are lacking, For example, groups that provide information for female mortgage borrowers or regarding retirement savings for women will benefit by knowing how to approach the material to make it most useful to women.

Finally, policymakers will also benefit from information and research that could lead to more effective financial education. As financial education continues to grow, policymakers will need to determine how best to allocate funding for programs. Additionally, policymakers who focus on women's economic security will also benefit from a greater understanding of the financial topics women need as a step toward economic security. This information is relevant to policymakers at all levels—federal, state, and local—because information regarding women's financial knowledge needs is relevant to programs at all levels.

Who Will Benefit?

An understanding of finance, or financial literacy, provides people with the basic tools to begin to take responsibility for their financial well-being (Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet et al., 2005: and Van Rooji et al, 2007). It also allows them to explore many new possibilities in life. For women in the United States, this need could be deemed even more vital given that women are still paid less than men for the same kinds of jobs, have less access to higher-paying jobs and education, and tend to accumulate less wealth over time as they may choose to stay home to care for their children for all or part of their prime working years (Heinz & Folbre, 2000; Secor, 2008; Willis, 2008; Lusardi & Mitchell, 2005; OECD, 2005; U.S. Census Bureau, 2008). A more desperate perspective is the alarming rate of women under the poverty level, the growing rate of women-headed households, the increased rate of divorce, and the persistent discrimination in the home and workplace that continues to burden women and impede their financial security (Heintz & Folbre, 2000). These women, their families, and ultimately society will benefit from a greater understanding of how to help women become more financially literate.

Assumptions

The primary and most significant assumption in this study is best expressed in the following diagram:

Financial education -> financial knowledge -> responsible financial behavior

Specifically, the assumption is that financial education leads to financial knowledge, which in turn leads to responsible financial behavior. Chapter 2 of this paper will explore this assumption further, and provide research support in favor of it. However, the goal of the study is not to prove the link between knowledge and behavior, but rather to acknowledge its acceptance in the existing literature on financial literacy.

A second assumption is that one of the roots of the problem of women's lack of financial literacy today is that the right financial principles are not being taught. In other words, it is assumed that women will gain financial knowledge if they are just taught the financial principles that are currently lacking in financial education. Therefore, a delimitation of this study related to this assumption is that specific educational treatments affect women's financial literacy will not be examined in this research.

A third assumption is that girls and women have access to financial education. Chapter 2 of this paper will explore this assumption further, and provide evidence of supporting research about this access. As a related delimitation, this study will not attempt to prove that this access is available.

Finally, it is well established that women are not the only individuals in our society who have been traditionally disadvantaged and under-served in terms of access to both financial resources and financial literacy. Therefore, while this same study could include other under-capitalized groups (e.g. racial/ethnic minorities), this study focuses exclusively on gender as an ubiquitous and important issue. However, the intentional choice to focus on women does not diminish the importance of addressing greater financial equity (in terms of both access to capital and financial literacy) for all individuals and groups.

Definitions

In this study, financial literacy will mean that one is literate in the issues of managing money (including saving, budgeting, investing, credit, insurance, and taxes), and utilizes that knowledge to gain personal welfare through financial security. There is a more extensive explanation of this definition and its determinants in Chapter 2.

Overview

The purpose of this paper is to explore the financial knowledge that women are lacking but need today through examining different sources of information on that topic. Chapter 1 has provided a statement of the problem, the purpose of the study, and why the study is significant to a variety of constituencies. Chapter 2 will begin an overview of the literature on financial literacy, including an examination of the definition of financial literacy, what is understood about financial knowledge, and the connection between financial understanding and responsible financial behavior. Additionally, current financial education programs, their accessibility, and their effectiveness will be explored. Finally, a look at how targeted women's financial education programs have benefited women can provide insight into the value of understanding the financial understanding needs of women. Chapter 3 will define the research design, data collection and analysis methods, and limitations of the study. Chapter 4 will discuss the results of the study, and Chapter 5 will examine the findings of the study, and their implications for practice, policy, and research.

CHAPTER 2

REVIEW OF THE LITERATURE ON FINANCIAL LITERACY AND WOMEN

Introduction

Financial understanding is important to all people, but especially to groups like women who are traditionally more economically oppressed and vulnerable due to existing and historical societal discrimination, but are nevertheless playing an increasing role as the sole breadwinner in families. A lack of financial understanding can compound this potential for economic instability for women and their children.

Some women have escaped the dire straits of economic discrimination, and have managed to force their way through the *glass ceiling* to higher-paying jobs. In fact, women compose 40% of the population with assets of $500,000 or more, compose half the workforce, and own 30% of all businesses (Dickinson, 1996). However, while these women may have more financial resources than some, financial consulting surveys show "a disturbing disregard" for the financial well-being of women compared to men (Dickinson, 1996). According to Dickinson (1996), even though women are becoming more economically prominent in some cases, they still receive less attention as well as inferior advice and treatment by financial services brokers.

A lack of financial literacy can mean that women of a range of income levels do not have adequate tools to navigate the financial areas of their lives. A lack of financial understanding can mean that women and their children do not have an equal chance at becoming financially secure. It is necessary to understand the kind of financial understanding women need in order to begin to understand how to help women become more financially literate.

The next section will include an explanation for the working definition of this paper, and how it connects knowledge and behavior. Next, a look at which groups have more—and less—financial knowledge follows. An exploration of the link between knowledge and behavior is the next topic discussed, as it sets up an integral relationship that will be explored through this study. A look at current programs, access, and their effectiveness follows in an attempt to lay the groundwork for an understanding of what types of financial education are currently available. Finally, an examination of how targeted financial education has helped women rounds out the section and draws the conclusion that education can impact behavior.

Topical Areas

What is Financial Literacy?

The study and understanding of financial literacy is laden with challenges. Before discovering how to overcome the obstacles for gaining financial literacy, we first have to overcome the obstacle of defining it. In fact, the complexities to defining financial literacy are indicative of the barriers to acquiring it.

A range of definitions exists that differ mainly in scope, ranging from broad concepts to specific skill sets. The basis of the content of financial literacy is finance and economics applied to life needs, and an essential component of the definition seems to be not just the comprehension of finance and economics in one's life, but the application of that understanding for one's personal welfare.

One approach to defining financial literacy is to start by breaking down the concept of *finance*. Finance can be understood as a combination of math, economics, and risk along with its accompanying psychological components. Lerman and Bell (2004) point out that "finance can be a complicated subject involving sophisticated mathematics, a deep understanding of economics, and a recognition that psychological factors influence actual choices in the context of risk" (Lerman and Bell, p. 16).

The concept of *complicated subject* is key here, and one of the reasons that financial literacy can be so challenging. Economic understanding and its behavioral components are also an important part of financial literacy, and an explanation of how economic understanding is related to financial literacy will be explored further in this section.

Finance is also scaleable; it can pertain on a large scale to government entities, as in *municipal* finance; to companies, as in *corporate* finance; or on a smaller scale to individuals, as in *personal* finance. While financial literacy could mean in a broad sense an understanding of all things financial, taking into account an understanding of the entire scale, this study will focus on individual or *personal* financial literacy. One challenging aspect of this idea is that even when focusing on financial literacy on an individual, or personal level, some degree of comprehension of larger-scale finance is necessary in order for comprehensive literacy about an individual's personal financial situation. The definitions that follow begin to combine the larger- and smaller-scale concepts of finance, and highlight the idea that understanding one's personal financial situation also involves having the reasoning tools to comprehend a larger financial picture of a company or a national economy.

Zvi Bodie, a Boston University professor of Finance who writes extensively on pension finance and investment strategy, explains in a research note that "finance is a branch of economics that deals with budgeting, saving, investing, borrowing, lending, insuring, diversifying, and matching" (Bodie, 2006, p. 1). These issues are wide-ranging, meaning they are necessary for governments and corporations, as well as for individuals. The four principles that Bodie believes should serve as a guide for setting standards of financial literacy for individuals, and for utilizing in making personal financial decisions, include the following:

1) Keep in mind the "Law of One Price," meaning that that the same item should have the same price in all markets (Lamont & Thaler, 2003) when making financial decisions.
2) Make decisions about personal savings and investing with the long-term perspective that personal financial resources need to be allocated such that lifetime earnings cannot be surpassed by lifetime consumption.
3) Handle decisions about managing risk in investing by using a rational model that seeks to maximize welfare, which is commonly done by investing in assets that meet investment goals, and diversifying investment allocations to spread risk.
4) When analyzing financial decisions, be sure to account for taxes and the costs of the transactions and those fees (Bodie, 2006).

Morton (2005) agrees that personal finance should be grounded in the concepts and principles of economics. He believes that the study of economics allows personal finance to be viewed in a frame within which consumers are also producers and citizens. For example, economic reasoning, which generally entails the overarching economic basis of taking actions to maximize one's utility, would indicate that consumers should seek to improve their well-being by attaining education and job skills that have a value in the marketplace (Morton, 2005). Through extrapolation, this reasoning would seem to mean that financial literacy would go hand in hand with economic reasoning, and that financial literacy would mean that individuals had the tools to know and take the steps to maximize their economic utility.

Morton (2005) goes on to suggest that educational topics for personal finance could be centered around concepts and principles of economics. For example, understanding the concept of *scarcity*—the idea that resources are limited and consumers have to make trade-offs in society—is a central tenet for both economic and financial literacy. Finite, or limited, societal resources include human resources, natural resources, and capital goods. Morton concludes that economics and personal finance are both simply about choices and their consequences, both positive and negative (Morton, 2005).

Outside of the broader fields of finance and economics, there are efforts to define financial literacy in similar terms: individuals, money, and security. Financial literacy is defined by the Jump$tart Coalition for Personal Financial Literacy (Jump$tart), the leading standard-bearer for the field, to be the ability to use one's resources for lifetime financial security. A component of that is personal finance, which is defined by Jump$tart as the principles and methods that people use to manage income, assets, and debt (Jump$tart Coalition for Personal Financial Literacy, 2008).

The definition of financial literacy that seems to best capture the broader fields of finance and economics, and the narrower field of personal finance, is one established by Jeanne Hogarth with the Federal Reserve Board in Washington, D.C. Hogarth observes that financial literacy may have a variety of meanings to different people, and that the meaning can be quite broad, encompassing an understanding of economics and how consumer decisions are affected by marketplace conditions and outcomes. However, financial literacy can also focus more specifically on basic money management including budgeting, saving, investing, and insurance (Hogarth, 2002).

Hogarth (2002) determined after reviewing a range of definitions of financial literacy that the consistent themes running through the concept include:

1) "Being knowledgeable, educated, and informed on the issues of managing money and assets, banking, investments, credit, insurance, and taxes;
2) Understanding the basic concepts underlying the management of money and assets;
3) Using that knowledge and understanding to plan and implement financial decisions" (Hogarth, 2002, p. 3).

Ultimately, the definition that will be used for this paper gains most of its substance from the themes illuminated by Hogarth (2002) above, but also has a heavy dose of the idea of the economic concept of maximizing one's utility, or in other words, providing for one's lifetime security (Morton, 2005). Specifically, in this study, financial literacy will mean that one is knowledgeable in the issues of managing money (including saving, budgeting, investing, credit, insurance, and taxes), and utilizes that knowledge to gain personal welfare through financial security.

This analysis of how people can gain financial literacy is beginning to reveal the linkage of complicated knowledge and focused action. To begin with, the issues of managing money listed above each entail whole sub-categories of financial and economic concepts and ideas, many of which can change rapidly as economies develop and financial products evolve. Gaining this knowledge means having access to it, which at a minimum requires knowing how to find sources that provide the information - and updates to it - in a clear and accurate way. The second piece is action or utilizing that knowledge to bring about one's security, which involves behavioral, psychological, and cultural attributes that further complicate the attainment of financial literacy. These issues provide the first view of the multi-faceted nature of the concept of financial literacy.

What Do We Know About Financial Knowledge?

So it is clear now that while financial literacy is a complex, multi-faceted area, its challenges are topped only by its importance in the world today. But unfortunately, as will be shown in this section, according to numerous surveys, studies, and researchers, few people in the world have a strong financial understanding: It seems that much of the world is financially illiterate. And even more significantly, those who need it most for basic survival - lower income and other disadvantaged groups - seem to have it the least.

While this study will focus on financial literacy in the United States, it is still worthwhile to start with a global perspective before the focus is narrowed, to gain a sense of the universal challenges to financial literacy. The OECD's 2005 international report identified surveys of financial literacy in twelve countries. All of the surveys conclude that the financial literacy level of most consumers in these countries is very low. Responses to six surveys in five countries - Australia, Japan, Korea, the United Kingdom, and the United States - all indicated a low level of financial understanding among respondents. The survey results also drew conclusions about demographic correlations with financial literacy. According to the results, financial understanding was shown to be correlated with education and income levels in those surveys. While financial literacy levels were found to be low in general for consumers, they were especially low for certain groups of consumers, such as the less-educated, lower-income respondents, and minority groups (OECD, 2005). This demographic pattern, where lower socio-economic status is correlated with lower financial literacy, is played out in study after study (OECD, 2005; Lusardi & Mitchell, 2007; Lerman & Bell, 2005; Jump$tart, 2008, Markow & Bagnaschi, 2004),

Taking a U.S. perspective and looking specifically at American adults, survey results indicate that many of them are not financially literate either, despite some belief on the part of respondents that an economic understanding is necessary. A survey conducted for the National Council on Economic Education in 2005 showed that nearly all U.S. adults believe that "it is important to have a good understanding of economics" (Lusardi & Mitchell, 2007, p. 2). However, the findings of actual financial knowledge fell short of that belief. The survey included a questionnaire on topics grouped into categories including *Economics and the Consumer*; *Money, Interest Rates and Inflation*; and *Personal Finance*. When the results were calculated using a standard letter-grade scale, the average adult score was C, while most high school respondents scored grades of F (Lusardi & Mitchell, 2007). As will be considered next, the youthful generation that is acquiring earlier access to credit is no more financially literate than their parents.

American adults' low level of financial knowledge was echoed by Hilgert and Hogarth (2002), who utilized data from the University of Michigan's Survey of Consumers. Their study involved 1,000 respondents between the ages of 18 and 70 taking a 28-question True/False Financial Literacy quiz. The questions examined topics including credit, saving patterns, mortgages, and general financial management. Overall, the Hilgert and Hogarth (2002) study found that these multi-aged adult respondents answered only two-thirds, or approximately 67%, of the questions correctly.

The Jump$tart Coalition does an established survey of the financial literacy of high school students every two years, and it is interesting to note that the scores do not seem to be improving over time. The 2008 survey of financial literacy indicated that U.S. high school seniors may be even less financially literate than their parents. The high school seniors who were involved with the 2008 survey correctly answered only 48.3% of the questions. These results may indicate the start of a downtrend, as the 2008 scores showed a decrease from the 2006 performance, where the students correctly answered 52.4% of the questions. Jump$tart included college students in the survey for the first time in 2008, and found similarly disappointing results. College students correctly answered 62% of the survey questions. Interestingly, scores among college students increased with their grade level in school. For example, college freshmen received a score of 59%, while college seniors received a score of 65% (Jump$tart, 2008).

Similar to the OECD (2005) survey, many U.S. studies found key differences among demographic groups: People with low education, women, African-Americans, and Hispanics tend to display very low financial literacy. Lusardi and Mitchell (2007) found through their testing of financial understanding, that financial literacy increases with education: The more educated respondents are more much more likely to answer the questions correctly. Similarly, Lerman and Bell (2005) found that low-income families were found to be especially vulnerable to financial misinformation. According to Markow and Bagnaschi (2004), socioeconomic differences in financial knowledge grow as people age.

The 2008 Jump$tart survey showed similar demographic results for high school seniors and college students. Caucasian students correctly answered 52.5% of the questions, while Hispanic students correctly answered 45%, and African-Americans correctly answered 41.3% of the questions. Jump$tart found a similar scoring distribution among the college students: Caucasian college students correctly answered 63.3% of the questions, Hispanic students correctly answered 59.8%, and African-American students answered 53.3% of the questions correctly.

The Link Between Knowledge and Behavior

The coupling of financial knowledge and responsible financial behavior yield financial literacy, according to the working definition used in this paper. Some would argue that there is an implicit belief that increases in knowledge will lead to improved financial behavior (Hilgert, Hogarth, & Beverly, 2003). While there is an inequity with regard to financial knowledge, it is still critical to understand the relationship between financial knowledge and financial behavior.

Some research has shown that emotional biases can make it difficult for people to make rational financial choices, even if they have adequate knowledge to do so (Willis, 2008). Some issues include intangible transaction costs like negative feelings during the process, overwhelming information and choices, high financial and emotional stakes, discomforting thoughts like dealing with aging and death, and uncertainty about the future. Other issues include decision makers opting to only partially evaluate a financial decision by focusing on the part that is the easiest to understand, and overcoming inertia and passivity to being to work on financial planning (Willis, 2008). Willis (2008) also notes a concern that the array of consumer financial products today require a vast and ever-changing body of knowledge that would be difficult to provide through financial education.

As it turns out, many other researchers have found that financial knowledge can be statistically linked to financial practices like cash-flow management, credit management, saving, and investment, according to Hilgert et al. (2003). However, the pattern viewed by the researchers in this study was significant in that it showed that learning and experience can both flow from each other. Effective financial education may require more than information; it may need a combination of information, motivation, and skills building (Hilgert et al., 2003).

Much research has been done in the field of investing and retirement savings, which can provide a window into how financial literacy translates into behavior. Lusardi and Mitchell (2007) find that people who have more financial knowledge are also much more likely to make plans for retirement. This implies that there is a positive connection between financial knowledge and responsible financial behavior, and this association has been echoed by other researchers in the area of investing. For example, Calvet, Campbell, and Sodini (2005) and Van Rooji, Lusardi, and Alessie (2007) find that respondents who are more financially sophisticated are more likely to invest in stocks, which are considered to be more efficient for gaining profit over time. Hilgert et al. (2003) and Hogarth (2006) were both able to find connections between financial knowledge and the way people behave.

Along those lines, Lusardi and Mitchell (2008) also discovered that older women in the United States have very low levels of financial literacy, and similarly, the majority of those women have undertaken no retirement planning. These research findings seem to indicate that financial knowledge and planning are interrelated. Lusardi and Mitchell (2008) also found that knowledge about risk diversification was a means of differentiating between the sophisticated and the unsophisticated respondents, and those who understand risk diversification are much more likely to plan for retirement.

So while financial knowledge may not always lead to better financial behavior, there is evidence that a linkage between the two does exist. At the same time, there may also be some emotional and psychological barriers that mute the relationship. But nevertheless, it seems evident that financial knowledge can provide the opportunity for better financial decisions, and similarly, low financial literacy has been shown to lead to less positive financial decisions. Because this relationship has been established in a number of studies, an examination of how to create financial programs that lead to improved financial knowledge is critical.

What Programs are Available, and Who Has Access?

There are currently numerous mechanisms for financial education programs, which seek to improve financial knowledge and behavior. The number and types of financial education programs have expanded significantly starting in the 1990s until today (Braunstein & Welch, 2002; National Council on Economic Education, 2007). There is an assortment of other types of providers of financial education as well, including community-based organizations, cooperative extension services, employers, the military, community colleges, and faith-based groups (Vitt et al., 2000). The variety in scope and demographics means that Americans of all ages and all walks of life are receiving access to financial education.

Youth is a primary target group, and public schools are a commonly used outlet for financial education in the United States. However, financial education programs can vary considerably by state and by school district (Burhouse, Grambell, and Harris, 2004). According to the National Council on Economic Education (NCEE, 2007), 21 states included personal finance in their standards in 1998, with an increase to 40 states' inclusion in 2007. Some nine states required high school courses to be offered in 2007 (NCEE, 2007).

The NCEE 2007 survey looked at Economics and Personal Finance education in schools. While economics has typically been included in Social Studies curricula, economics is currently included in the educational standards of all 50 states. As of 2007, 40 states, up from 38 in 2004 and 28 in 1998, require the actual implementation of these economics standards. Additionally, according to the NCEE survey 17 states require students to take an Economics course as a high school graduation requirement. The Economics requirement is an increase from 14 states in 2004 and 13 in 1998. At the same time, though, only 23 states require the testing of student knowledge in Economics, which is actually a decrease by two since 2004 (NCEE, 2007).

Personal Finance, which is a newer and more specific subject related to financial literacy, is now included in the educational standards of 40 states (up from 34 in 2004 and 21 in 1998). Personal Finance standards are required to be implemented in 28 states, which is an increase from 20 in 2004 and 14 in 1998. At the same time, only seven states require a Personal Finance course as a high school graduation requirement. This is an increase from six in 2004, and one in 1998 (NCEE, 2007). While Personal Finance requirements are increasing with time, they are still far less stringent than for customary high school subjects. For example, 44 states require a specific number of credit requirements in high school courses in Math and English, with the remaining six states leaving it to be decided locally (National Center for Education Statistics, 2006).

There is a large assortment of other channels for financial education, to the extent most U.S. consumers would be part of one of target audience or another for financial education. For example, financial institutions, community-based organizations, and government agencies all engage in financial education of various kinds. Most financial literacy initiatives have very specific target audiences. Youth, military personnel, low-income families, first-time homebuyers, employees, church members, and women are all targets. Since welfare reform legislation of the mid-1990s, welfare-to-work programs have also incorporated financial education. There are programs for different ethnic groups, various situational groups (like pre-release prisoners), and various demographic groups, such as new parents or pre-retirees (Hogarth, 2006).

Additionally, some programs focus on low-income families and adults outside the financial mainstream. First-time homebuyers are a key audience for many financial literacy programs that focus on low- to moderate-income families. An FDIC program called Money Smart aims to help adults outside the financial mainstream learn money skills and initiate productive banking relationships (Money Smart, 2008).

Are Current Financial Programs Working?

However, in the midst of this growth of programs, financial literacy education studies tend to show contradictory results. As will be examined in this section, some research has been done that shows that educational programs work, and similarly research has been done that indicates educational programs do not have a significant impact on financial literacy. This range of results is not surprising given what seems to be understood about financial literacy. Not only is financial literacy an extremely complicated area that seems to be attained by few, the differences in understanding have been shown to have a socio-economic correlation. This could begin to indicate that financial understanding tends to be gained through a non-formal educational setting, like the family or the community.

In the meantime, studies have looked at short-term gains in knowledge from financial education, as well as longer-term impacts on behavior. To begin with, according to an evaluation of the High School Financial Planning Program sponsored by the National Endowment for Financial Education, students exposed to the program reported significant improvement in their financial knowledge up to three months later (Boyce & Danes, 1998). Teacher surveys of student knowledge taken before and after the educational treatment showed that students improved their knowledge in the areas of understanding of career/income relationship, consumer credit, car insurance, and the time value of money. This study showed a behavior shift as well as a result of exposure to the program. According to the researchers, about 60% of respondents reported changing their financial behavior by increasing their savings as a result of the program (Boyce & Danes, 1998).

Another study that is widely quoted in the financial literacy literature shows a longer-term impact of financial education on savings behavior and net worth. Using surveys of 30 49-year-olds in 1995, Bernheim, Garrett, and Maki (2001) found that state-mandated financial education requirements led to more students taking financial education, and ultimately, to higher savings and net worth. According to the study, students' savings rates were approximately 1.5% higher for those entering a high school grade five years after the implementation of a financial education mandate than for students not exposed to the mandate. Compared to the overall population, the rate of saving out of income for students exposed to the mandate was 4.75% higher in the population distribution than for those who were not. (Bernheim et al., 2001). These surprisingly large impacts suggest that financial knowledge perhaps cannot be shown on a test, but still may impact financial behavior, even later in life, when the chances to apply this education through experience increase (Mandell, 2005).

A multivariate analysis performed by Mandell (2005) on the Jump$tart survey data showed that a full course in personal finance did not affect financial knowledge among high school students, but did raise self-reported levels of thrift as well as actual indicators of thrift, including having a savings account. Every Jump$tart survey since 2000 found that high school seniors who have completed a full-semester high school course in money management or personal finance are not more financially literate than students who have not taken such a course. (Mandell 2005).

Caskey (2006) reviewed a number of empirical studies and concluded that the studies suggested that education in personal financial management can have a positive impact on low- and moderate-income households. Specifically, it has been shown to help those consumers improve their credit histories and grow savings. However, the author indicated that the results are only suggestive (Caskey, 2006).

After this brief review of financial education studies, it is important to note that the working definition of financial literacy used in this paper involves individuals being able to utilize tools for financial security, and the studies reviewed all indicate a positive shift in financial behavior following some form of financial education. Certainly it raises the question about what appears to be a disconnect between *testable* knowledge and shifts in behavior. The change in behavior is more significant as it relates directly to an important aspect of financial literacy: individuals behaving in a way to increase their financial security.

To gain some insight into why educating for financial literacy may not always yield positive results on a test, it is necessary to begin to examine what specifically is it about financial literacy that is so hard to teach in a formal educational setting. Some of these issues were alluded to in the earlier discussion of the challenges to financial literacy, including the complicated nature of the topics involved, and the possible difficulty in accessing comprehensive and accurate information, as is previously described in terms of the information asymmetry between the financial product seller (banker, broker) and buyer (consumer).

Lusardi and Mitchell (2007) question whether in the field of financial education, "the 'cure' is inadequate for the disease" (Lusardi and Mitchell, 2007, p. 12). They argue that widespread financial illiteracy will not be solved by "a one-time benefit fair or a single seminar on financial economics" (Lusardi and Mitchell, 2007, p. 11). This is not because financial education is ineffective, but because perhaps education alone may not be sufficient to provide financial understanding. Because of the behavioral component to financial literacy, Lusardi and Mitchell (2007) recommend offering to consumers the tools to change their behaviors, rather than simply providing financial education.

Willis (2008) argues that education falls painfully short of the need for financial knowledge that most Americans have, and what they need to navigate the complicated world of consumer financial instruments - including credit, insurance, and investment products - that are currently being offered, or have yet to be invented. In order to provide the knowledge of the necessary universe of financial products and concepts, educators need to offer a higher-level of understanding of finance because of that complexity and volatility of the financial markets. Basic concepts would not be sufficient for navigating the consumer financial world (Willis, 2008).

Transforming financial education into financial knowledge has been shown to be a challenge. Contradictory results are indicated in studies of this topic. This difficult relationship may stem from the fact that financial topics are complicated to learn, or possibly due to the educational delivery of the concepts.

How Has Targeted Financial Education Impacted Women?

Internationally, financial education has been recognized as an important factor in economic development, and is generally coupled with microfinance. According to the The Microfinance Gateway, financial education is a tool in the process of coming out of poverty as it helps people acquire the knowledge and skills to wisely manage their money and utilize financial services effectively. Additionally, financial education is believed to lead to increased self-esteem and confidence as a result of incremental successes in achieving financial goals (The Microfinance Gateway, 2009).

According to the International Center for Research on Women, business and management training for women can ultimately help women create their own enterprises, which in turn generate social and economic benefits for women, their families, and society as a whole. Access to this type of education could be the missing link that would allow women to succeed economically. Additionally, access to credit and financial resources would also help, but women would need to know how to understand these institutions (International Center for Research on Women, 2008).

Programs like Citigroup's corporate foundations *Financial Education for the Poor* project was originally designed to bring financial education to poor people who could potentially participate in microfinance and other forms of economic development. The program's curriculum consisted of modules on budgeting, saving, managing debt, understanding banks, and financial negotiation. As many lesser-developed countries do not have prevalent, sophisticated, or consumer-oriented banking sectors, the education is not designed to teach people how to manipulate and manage banking services. Rather, the basic financial education is intended to help families increase their capacity to save more, spend less, borrow wisely, and manage their debt with discipline. More experienced participants in the program would learn to effectively use more advanced financial products and services, from money transfers to insurance (MicroEnterprise Americas, 2006).

Langowitz and Minniti (2007) show that entrepreneurship is becoming an increasingly important source of employment for women in many countries. Women also seem to be more successful than men in entrepreneurial ventures in some countries. According to The Global Entrepreneurship Monitor (GEM) 2007, published by the Center for Women's Entrepreneurship and Leadership at Babson College, research on women in development indicates that returns to the investment in women are much higher than for men. Women are more likely to share their gains in education, health, and resources with members of their families and their communities. Research on microfinance shows that the same is true for economic investments. The GEM also found that women are more likely to work for, buy for, and share their economic and non-economic rewards with other people. For this reason, the GEM reports that finding ways to empower women's participation and success in entrepreneurship is critical for more sustainable and successful economic development in all countries. (Allen, Elam, Langowitz, & Dean, 2008).

International financial programs have been shown to have a beneficial impact on women's financial behavior. These programs have led to more financial independence for women. Entrepreneurship similarly has shown to be an increasingly important source of employment for women internationally, and the financial programs reviewed here assist in that development.

Conclusion

Financial literacy can mean that one is literate in the issues of managing money (including saving, budgeting, investing, credit, insurance, and taxes), and utilizes that knowledge to gain personal welfare through financial security. Research has shown that women do not have strong financial literacy (OECD, 2005; Lusardi & Mitchell, 2005; Mahdavi & Lewis, 2006), and studies have also shown that financial knowledge can have a positive impact on behavior (Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet et al., 2005: and Van Rooji et al., 2007).

At the same time that women's financial responsibility is increasing, women's financially literacy is not keeping pace. Societal discrimination, a rapid evolution of women's role as employee and head of household, and a recent history of women's independence in the financial world have been a barrier to women's ability to make decisions to take care of themselves financially (Heinz & Folbre, 2000; Secor, 2008;

Willis, 2008; Lusardi & Mitchell, 2005; OECD, 2005). Making responsible decisions that lead to financial security is at the crux of the definition of financial literacy. While government financial policy has historically been insufficient for protecting consumers in all cases, government can play a role in helping to protect consumers through working to improve financial literacy through targeted financial educational programs.

In determining how American women can be helped to make better financial decisions, one approach is to utilize financial education as a conduit for financial knowledge. Better financial knowledge can lead to improved financial behavior. However, part of the examination of financial education for women needs to explore women's specific financial understanding needs in order to determine which topics should be explored in their financial education. Closer examination of the type of financial understanding women need in order to be financially literate could yield a better understanding of how to increase women's financial literacy, and ultimately give them the tools to make better financial decisions for themselves and their families.

CHAPTER 3

RESEARCH METHODS

Introduction

As demonstrated in Chapter 2, previous studies on women and financial literacy have indicated that women have low levels of financial literacy, and consequently are not able to protect themselves financially in an adequate manner. Additionally, studies have shown that financial knowledge can lead to improved financial behavior. However, an examination of the financial information needed specifically by women remains missing within this growing body of literature. Financial knowledge has been shown to have a positive impact on financial behavior; yet, while financial education is available for women, there are signs that it is not always effective in yielding improved financial knowledge.

Given the importance of financial knowledge for women, and the increasing emphasis on financial education, this study will examine the areas of financial understanding that women are lacking so that an educational focus can be placed on those critical areas. Specifically, the study compares indicators and evidence of women's financial literacy in order to establish themes of areas of particular lack of financial knowledge. The research methodology and approach used for this study is qualitative, utilizing the grounded theory approach to data analysis, which incorporates the constant comparison method in the development of categories, properties, and tentative propositions that eventually yield theory.

The following section describes the conceptual framework, design, and data and methodology of the study.

Conceptual Framework

The lack of women's financial literacy is well-documented (OECD, 2005; Lusardi & Mitchell, 2005; Mahdavi & Lewis, 2006). The challenge women face in their financial responsibility for family, in the workplace, and for themselves in different places in their lives is similarly clear (Heintz & Folbre, 2000; U.S. Bureau of Labor Statistics, 2008; U.S. Census Bureau, 2008). As the financial world becomes more complex and fraught with serious consumer pitfalls, it is becoming more important for everyone, but particularly those who are already lacking an understanding and finding themselves in new positions of responsibility and economic freedom, to have a better financial understanding. The role of women has changed dramatically in the past few decades. The financial world has undergone an equivalent transformation. This dual evolution has provided more opportunities for women to fall victim to fraud and unethical behavior in the financial services industry.

Financial knowledge has also been shown to have an impact on behavior. Many studies 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). Women have specific needs for financial literacy given their evolving role and responsibilities in society. In considering financial literacy for women, it is the examination of women's specific financial understanding needs in determining how to promote women's financial literacy and knowledge-based financial behavior that provides the conceptual framework for this study. A visual depiction of the conceptual framework is provided below.

Current Knowledge → Required Knowledge

↗ ↙

↓ ↓

Educational Programs → Knowledge-Based Behavior

This visual depiction of the conceptual framework demonstrates a perspective that current financial knowledge needs to be transformed into the financial knowledge that is currently required to navigate personal finance today. That transformation should occur in part through educational programs. Because of the causal link between knowledge and behavior (Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet et al., 2005: and Van Rooji et al., 2007), in order for women's behavior to be enhanced by financial knowledge, the appropriate financial knowledge needs to be provided through educational programs. Additionally, because of the established cause-and-effect relationship between financial education and financial literacy, the education needs to include the specific information that women need most given their unique place in society.

It is through this lens - women's specific financial information needs - that this study examines women's financial education. By focusing on the qualities of women's financial understanding, it will be possible to gain a clearer understanding of the financial topics that need to be provided in financial education for women, in order to give women the ability to practice knowledge-based behavior.

Research Questions

The primary research question for this study is what knowledge do American women need to be helped to make better financial decisions? A secondary set of questions elaborate on different approaches to finding that information: through focus group interviews with women, through the analysis of financial literacy surveys, and through the analysis of women's financial behavior.

The research question that guides this study is:

What knowledge do American women need to make better financial decisions?

Key sub-questions include:

a. What financial topics do women struggle with most, as demonstrated through financial literacy surveys?

b. What are common financial problems for women, as demonstrated through different financial behaviors?

c. What financial knowledge do women report they need?

Research Design

In order to come to an understanding of possible responses to the research questions above, a qualitative research approach and methodology is necessary. The overall approach involved analyzing categories and themes with a mixed-method approach to analyzing women's financial understanding, and the areas of knowledge that women are particularly lacking. As the basis for an empirically generated theory is ultimately developed from the data analysis—being simultaneously grounded in and emerging from the data—a grounded theory approach to data analysis as developed by Glaser & Strauss (1967) is used in this study to ground the findings in the data.

The major difference between grounded theory and other types of qualitative research is the development of theory that comes from the data (Strauss & Corbin, 1994). Grounded theory is an inductive process where the researcher is the primary instrument of data collection and analysis. The type of theory developed is usually *substantive* in the sense that it has its focus in everyday situations such as educational programs, and has a specificity and usefulness to practice (Merriam, 1998).

Grounded theory has a specific set of procedures for analyzing data, known as the *constant comparative* method, and these procedures prove to be effective and efficient for comparing disparate types of data sets. The overall object of constant comparative analysis is to find patterns in the data, and involves a series of comparisons across different levels. Specifically, one segment of data is compared with another to discover similarities and differences, and data are then grouped together on a similar dimension that becomes a category (Merriam, 1998).

The development of categories, properties, and initial constructs and propositions through the constant comparative method creates an evolution of the data into the core of emerging theory, and that core becomes a theoretical framework that guides additional collection of data. The derivation of theory from the data involves the continual integration and refinement of the categories, properties, and hypotheses. As the theory emerges, it does so "with a smaller set of higher level concepts" (Glaser & Strauss, 1967, p. 110). The categories ultimately become the findings of the study (Merriam, 1998).

This study incorporates three types of data collection that are ultimately analyzed through the constant comparison method to develop grounded theory. The three types of data are meant to provide information regarding women's financial knowledge, in particular, the areas of weakness in their financial knowledge. The three types of data include 1) survey results of women's financial literacy (see Appendix 1), 2) statistical trends that describe women's financial behavior (see Appendix 2), and 3) focus group interviews with women in a financial literacy course (see Appendix 3 for interview questions). The constant comparison method of analysis was used within and across the three types of data. The study involves three stages of analysis as a method for developing the categories, concepts, constructs, and propositions that ultimately yield a theoretical foundation that details the types of financial understanding that women are lacking.

This approach involved three stages of data collection and analysis. The first stage was a secondary analysis of financial literacy survey and test results to determine an initial grouping of categories and incidents of *high need* learning areas for women (see Appendix 1 for a description of the four surveys that are analyzed in this study). The second stage involved the analysis of statistical trends that describe women's financial behavior (see Appendix 2 for a listing of the areas of financial behavior that are analyzed in this study). Stage Three of the study involved focus group interviews with a group of women who were participating in a financial literacy course (see Appendix 3 for a list of focus group interview questions). The results of these focus group interviews were analyzed for emergent themes and concepts, and were then compared with the findings from Stages One and Two of the study to develop the final grouping of categories of *high need* financial knowledge areas for women, which ultimately form the theoretical conclusions of the study.

Systematic Procedures for Constant Comparison Analysis

The data analysis involved systematic procedures for constant comparison analysis. These coding procedures include open coding, axial coding, and selective coding as defined below:

- Open coding: identifying categories or themes from an etic perspective
- Axial coding: connecting the identified categories
- Selective coding: forming a theory that explains the phenomenon being studied

Ultimately, the coding occurred through a matrix that involves the delineation of the components of the analysis. The types of concepts included a foundational and extrapolated understanding, which is how they were used to code disparate data:

Categories

|

Properties

|

Constructs ⟷ Propositions

The data analysis and collection were iterative, meaning that each informed the other in terms of category and theory development. Additionally, the constant comparative method connected categories across data sets by comparing themes, concepts, and propositions with other categories.

Data Sources and Collection

As stated above, the data sources include analyses of women's financial understanding and current trends in women's financial behavior, as well as focus group interviews with women participating in a financial literacy class. The data collection proceeded in the following manner.

Stage One: Financial Literacy Survey Results for Women

The initial stage of the research design involved the constant comparison of sections of financial literacy surveys results for women (see Appendix 1 for list of surveys). The data sources and collection for Stage One included a specific group of financial literacy survey results for women that cover a prescribed set of financial knowledge areas. This particular set of surveys was chosen because they cover a wide demographic group of women. The set also covers the specific content areas that will be examined in this study. Given the goals of the study, and the definitions of financial literacy established in Chapter 1, the following criteria was used to select or reject these instruments:

1. The survey results pertain to women.
2. The survey covers the primary areas of financial literacy as defined in Chapter 1 of this paper. Specifically, the content areas are saving, budgeting, investing, credit, insurance, and taxes (see Appendix 4 for the definition of these concepts that will be used in this study).
3. The survey methodology is sound, following generally accepted principles of survey research.

The financial literacy surveys were ultimately used to generate categories and themes of *high need* learning areas for women; these high need areas were identified through a constant comparison of the emergent themes and concepts that were evident in the financial literacy survey results for women. The data analysis will be discussed further in Chapter 4 of this paper.

Stage Two: Areas of Women's Financial Behavior

The second stage of the study involved the collection and analysis of statistical trends that describe trends of women's financial behavior. These statistical trends include indicators such as income levels (U.S. Census Bureau), and savings rate (U.S. Bureau of Economic Analysis) for women. The link that has been established between financial knowledge and responsible financial behavior forms the basis for this data collection (Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet et al., 2005: and Van Rooji et al., 2007). Specifically, the reasoning for analyzing the financial behavior of women to help determine areas of need of financial knowledge based on the implication that financial behavior is positively affected by financial knowledge

Next, the information gained from the analysis of women's financial behavioral statistics were used to generate categories and themes of *high need* learning areas for women. Category, concept, and proposition development resulted from the constant comparison of the emergent themes and concepts that came from the financial behavior statistics and the financial literacy survey results for women. The data analysis will be discussed further in Chapter 4 of this paper.

Stage Three: Focus Group Interviews with Women in a Financial Literacy Class

The next stage involved focus group interviews with seven women who were participating in a financial literacy class, and a follow-up interview with three of the seven women from the first focus group interview session. This sample was identified and selected as a result of contacting organizations that provide financial literacy classes for women. The organizations were contacted via phone and email, and the organization that agreed to participate was asked to approach the women in their financial literacy class to request their participation in the study. The women were assured anonymity and fair and ethical treatment in the research process, and were given a *Consent for Voluntary Participation* form to sign. Ultimately, the women who agreed to be involved in the study participated in two focus group interviews on the premises of their financial literacy class. The interviews were digitally recorded and then transcribed and eventually utilized in the constant comparison data analysis.

The women who participated in the focus group interviews were lower-income women representing a variety of racial/ethnic groups. The women were not asked to self-identify their racial/ethnic identity, but some women clearly appeared to be African American and others exhibited Latina characteristics. They were participating in the financial literacy class as part of a program to receive funding for mortgages and other life needs. The group was not a random focus group, and as such, is limited in its generalizability.

A sample of women in a financial literacy class were chosen for a number of specific reasons related to their understanding of their own knowledge base. First, participation in the class provided them with a vocabulary and a language for identifying particular financial concepts that were discussed in the focus group interviews. Second, because these women had participated in a financial literacy class, there was an assumption that through the stronger financial understanding they may have gained, they may be better able to articulate their lack of understanding that pre-existed the class, or continued despite the class education. Third, they may have been able to reflect upon and draw conclusions about the financial knowledge they may not have had—but needed—before they were involved in the class.

The focus group interviews were conducted with women who were likely to be data-rich sources on the financial topics that women do not understand, but need to. These focus group interviews were semi-structured, and involved questions about the financial information or knowledge that the women did not have before participating in the financial literacy class, or that persisted despite the class education. These interview questions were framed in part by the initial analysis of the categories in the first two stages of the research. There were additionally open-ended questions to allow the focus group participants the opportunity to offer opinions, themes, and categories apart from those developed in Stages One and Two. For a list of focus group interview questions, see Appendix 3.

The questions were used to assess the interviewees' depth of understanding of these topics, but not as a structured examination of their particular understanding in any one area. The primary purpose of this phase of data collection was to receive structured feedback from women on the type of financial knowledge they have, do not have, and believe they need. They were also asked whether knowledge of the topics that did not end up receiving the *high need* classification would have served them in some way, to capture any deviation from the initial categories, concepts, and constructs developed in Stages One and Two of the research process.

Data Analysis

Data analysis involved three stages in which data were continually analyzed within and across the three stages of data collection. The central category that emerged from the analysts yielded the findings of the study.

Stage One: Financial Literacy Survey Results for Women

The first stage involved the secondary analysis of results of existing women's financial literacy surveys to generate categories and themes of *high need* learning areas for women. Thematic development resulted from the constant comparison of the initial codes and the subsequently identified themes and properties that were identified in the financial literacy survey results for women.

For the Stage One analysis, permission was sought and received for the use of existing survey results that pertained specifically to women. The data were accessed, and reformatted into spreadsheets as a management device for that round of data analysis. Where it was necessary to do so, the correct answer was determined for the survey questions. The questions where 70% and lower had incorrect answers were then determined to be areas that indicated insufficient knowledge.

Following the constant comparison method of data analysis, the first step in the data analysis was to generate an initial set of categories (Glaser & Strauss, 1967) from the survey results The first step involved the open coding of the data, which is the process of analysis that identifies concepts and their properties and dimensions (Strauss & Corbin, 1998).

Once broadly defined concept areas were identified, the next level of analysis focused on generating properties of the established categories (Strauss & Corbin, 1998), which can begin to generate alternative trends. For this study, the generation of properties was an analysis that involved dissecting the initial categories into groups of concepts that were dimensions of the category. This next level of analysis was aimed at an attempt to better understanding the specific areas of challenge to women's understanding of financial information.

The next phase of analysis for Stage One was *axial coding*, which involved linking the categories at the level of properties (Strauss & Corbin, 1998). In order to achieve this linkage, the survey-specific and question-specific properties were compared in an attempt to find connections within the original groupings of categories, in pursuit of trends and patterns that might yield an additional series of hypotheses, or support the first series.

The final phase of analysis within Stage One was selective coding, which is the process of refining and integrating categories into evolving theory (Strauss & Corbin, 1998). *Integration* is an interaction between the researcher and the data, which includes "not only who the researcher is, but also the evolution of thinking that occurs over time through immersion in the data and the cumulative body of findings that have been recorded…" (Strauss & Corbin, 1998, p. 144).

The selective coding process in this case was used to further investigate the proposition that grew out of the axial coding phase of analysis. It attempted to connect the categories and properties through a careful reconsideration of the survey results from the perspective of a financial educator. Specifically, the analysis and perspective of the researcher was framed through the lens of what would need to be taught to the survey respondents in order to help correct their areas of weakness in financial understanding. This framing yielded a coding process that further connected the initial sets of categories, properties, and functional topics. This type of framing and analysis was supported by the researcher's experience in developing financial curricula and financial educational programs, which enhanced this type of interaction between the researcher and the data.

The selective coding process in Stage One ultimately yielded a central category and related category. The central category yielded a proposition about the *high need* learning areas for women.

Stage Two: Areas of Women's Financial Behavior

The second stage of analysis involved the analysis of the results of the areas of women's financial behavior. As stated above, In order to investigate women's comprehension in the areas of financial literacy outlined earlier in this paper - saving, budgeting, investing, credit, insurance, and taxes - specific areas of behavior were examined. These areas included statistical trends related to women's income, savings rate, retirement savings, home ownership, mortgage loan default, mortgage foreclosure, credit rating, and participation in the stock market and other investing (for a list of the sources of statistics for data collection, see Appendix 2). Specifically, the areas were examined to identify areas in which women are particularly struggling.

As with the Stage One categories in the open coding process, the initial set of categories for Stage Two were developed based on the concepts inherent in the financial practices and behaviors that were being analyzed in this stage of research analysis. The areas of behavior under examination were believed to be associated with financial knowledge, based on the link between financial knowledge and behavior established earlier in this paper. Because of this, the pool of concepts used to generate categories were the same as in Stage One, meaning those that are generally accepted to define levels of financial literacy. Additionally, as this research project is focused on discovering the areas of need for women's financial literacy, the categories utilized for the first level of comparison were the primary content areas of financial literacy as defined in Chapter 1 of this paper. These concepts are saving, budgeting, investing, credit, insurance, and taxes.

The next phase of analysis for Stage Two was *axial coding*, which involved linking categories at the level of properties (Strauss & Corbin, 1998). As in Stage One, in order to achieve this linkage, the survey-specific and question-specific properties that were originally ascertained were compared in an attempt to find connections within the original groupings of categories, in pursuit of trends and patterns that might yield an additional series of propositions, or support the first series.

As in Stage One, the properties of the original series of categories were developed. However, due to the conceptual foundation that had been laid in Stage One, the process and discovery proceeded differently. Specifically, the creation of properties that were embedded in the questions in the axial coding process began to yield results that coincided with the central category developed in Stage One.

Selective coding in this case was used to further investigate the proposition that grew out of the Stage One research analysis. As with the Stage One analysis, this framing yielded a coding process that further connected the initial set of categories, properties, and functional topics, yielding a trend of a weakness in the *functional* understanding of personal finance. This stage of analysis also reinforced the related category that was developed in the Stage One research analysis.

Stage Three: Focus Group Interviews with Women in a Financial Literacy Class

The third stage of analysis involved analyzing the data gathered from focus group interviews with seven women participating in a financial literacy class, followed one week later with focus group interviews with three of the seven women (for a complete list of focus group interview questions, see Appendix 3). The interview questions were framed by the initial analysis of the categories in the first two stages of the research, as well as the initial development of the central and related categories. There were also additional open-ended questions to allow the interviewees to offer insights, themes, and categories apart from those developed in Stages One and Two.

The discussion question groupings were a subset of the key financial literacy areas that were developed through Stages One and Two of this study. The questions were developed through a grid that examined the key areas of knowledge, skills, and disposition that have previously been highlighted in the earlier stages of research.

3.1 Focus Group Interview Questions by Research Areas

	Budgeting	**Saving**	**Investing**	**Credit/Mortgage**
Knowledge (What do you need to know)	1, What do you think a budget is?	1. What do you think savings is? 2. What are different types of savings for?	1. What do you know about investing? 2. What are good investments?	1. How does credit work? 2. What is a mortgage?
Skills (Functioning—What do you need to know how to do)	2. How do you set up a budget? 3. What do you use a budget for?	3. How do you accumulate savings? 4. How do you accumulate retirement savings? 5. What are some good approaches for saving for retirement?	3. How do you invest? 4. How do markets work? 5. What is the best way to invest?	3. How do you get a mortgage? 4. How do you manage the service of a mortgage? 5. How do you get credit cards or personal loans?
Dispositions (How are you disposed to think or feel about it)	4. How important do you think budgeting is? 5. Do you feel like you have enough money to warrant a budget? 6. How do you think a budget might help you?	5. Do you think savings matter? 6. Why do or don't you save?	6. How do you feel about investing?	6.How do you feel about borrowing money? 7. How do you feel about mortgages?

The focus group interviews were then transcribed and studied for in-depth analysis. Four areas - budgeting, saving, investing, and credit/mortgage - were examined, and categories previously identified in Stages One and Two of the research were compared to see if they were reflected in the responses to the focus group interview questions.

The final stage of analysis included a constant comparison process of the codes that were derived from the initial two stages of data collection analysis and of the new codes that emerged from the focus group interviews. Because the first two stages of research in this study yielded clear and consistent themes, the Stage Three research was focused on the comparison of women's financial knowledge experiences with the themes that had already evolved. Ultimately, this multi-stage, multi-method analytic process yielded the final results of the study.

Researcher's Positionality

Because qualitative research is an inductive process where the researcher is the primary instrument of data collection and analysis (Merriam, 1998), researcher background and knowledge base is critical. This specific study involves the ability to understand a variety of financial topics. Additionally, the constant comparative analysis involves breaking ideas into their component concepts and hypotheses (Glaser & Strauss, 1967). In the case of researching the financial knowledge that women are lacking, the constant comparative analysis may involve breaking down financial categories into their conceptual bases and components. This type of research analysis would require the researcher to have a thorough understanding of financial topics. Additionally, when interviewing subjects who are not financial experts about their financial knowledge base, the interviewer/researcher may be able to have a more fruitful interview if she is able to break down complicated financial topics into a more understandable language.

I have worked in different fields with a financial focus including investment banking, financial journalism, and financial analysis and communications, for almost 20 years, and have worked in financial education for six years. I have developed financial curricula and financial educational programs for a variety of ages. I have written a number of research reports on financial topics for a variety of audiences. I have a masters degree that includes graduate-level courses in finance, accounting, debt markets, and the system of money in the U.S. Through this work, education, and experience, I have developed an in-depth understanding of the basic principles of financial literacy, and the limitations of education.

Additionally, I worked at the Coalition for the Homeless in New York City during the height of the homeless crisis in the late-1980s. I worked specifically with homeless families, who were generally headed by single women to help them find job training, sources of government funding, and housing for their families. Through working with these women, I gained some perspective into the type of financial knowledge that they had and what type of information they needed.

Finally, I was a journalist for eight years. As a journalist I did a number of one-on-one interviews, and learned how to understand people's experiences and tell their stories. More specifically, I was a financial journalist, which meant that the interviews I conducted and stories I wrote involved financial topics and financial understanding. When writing financial stories—especially on complicated topics like financial crises—I had to break the concepts down to their component parts to explain them to the reader. This type of financial analysis and communication assisted in my analysis of the data in the study.

Limitations

The greatest limitation to this study is that the qualitative analysis that will be used is open to multiple interpretations. Another limitation to this study is that it is only examining the topics that women need to know, and not the delivery of that education. Effectiveness of education, particularly something of a hands-on nature like financial literacy, may possibly depend on how and at what phase in development that treatment is delivered. However, that analysis is outside the scope of this study. This study is meant to be an analysis of the financial subject matter that women need in order to be financially literate.

A third limitation is the lack of information that the women being interviewed might have about the knowledge that they do not have but need. It may be difficult for these women to know the financial topics they do not know, but need to know in order to successfully navigate their financial lives. Some women may also have more financial knowledge than they realize, but they may not be able to articulate it in a way that is comprehensible to outside observers.

Conclusion

This study presents a unique opportunity to identify key topics in women's financial understanding that may lead to their increased financial literacy. Through the study of women's financial understanding and financial behavior, both through primary and secondary sources, topics can be isolated that are lacking in women's understanding of personal finance. The ultimate goal is the identification of financial topics that could bolster women's financial literacy and help women take financial care of themselves and their families.

CHAPTER 4

RESULTS, ANALYSIS, FUTURE STUDY

Introduction

The purpose of this study is an in-depth examination of the financial topics that women need to understand in order to make better financial decisions, given their current role and responsibilities in families and society. This chapter discusses the data that was generated through three stages of research, including analysis of financial surveys of women, statistics of women's financial behavior, and focus group interviews with women in financial literacy classes.

The original intent of the study was to utilize the accepted definition of financial literacy – knowledgeable in the areas of managing money (including saving, budgeting, investing, credit, insurance, and taxes) and utilizing that knowledge to gain personal welfare through financial literacy – to determine areas of high need financial learning areas for women. As such, the data were approached from the perspective of sorting areas of women's financial difficulty from areas of their financial understanding. This process yielded the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate.

An additional related category that was developed in the analysis of the research was women's deficit in product functioning and institutional operations understanding could be a result of the less experience they have had bearing responsibility for financial matters. Women's lower income level – which could ultimately be related to the economic barrier proposition stated earlier in this section - could also be a result of a difference in life directions of men and women.

The knowledge-based findings were discovered in the first stage of research analysis, and echoed and supported in the following two stages. However, continued examination of the data through the three stages of analysis yielded a critical issue in the analysis of women's financial literacy, which is the incompleteness of the accepted definition of financial literacy. These findings became apparent as more *real-life* information – through financial behavior analysis and focus group interviews – was investigated. Specifically, the flaw in the definition is the underlying definitional assumption made at the beginning of the study, which is supported in the literature, and is implicit of the accepted definition of the study, that financial knowledge is the input that yields the output of responsible financial behavior. In equation form:

$$\text{Financial Knowledge} \Rightarrow \text{Responsible Financial Behavior}$$

This equation indicated one input, financial knowledge, to yield the output of responsible financial behavior. However, through careful examination of financial survey results, financial behaviors, and interviews on financial topics, it became clear that this equation was missing an integral input, which is access to capital. Without access to capital, one can have financial knowledge but face economic barriers and opportunity costs to manifesting that knowledge in responsible financial behavior. This additional input yields the revised equation:

$$\text{Financial Knowledge} + \text{Access to Capital} \Rightarrow \text{Responsible Financial Behavior}$$

As such, without sufficient capital, responsible financial behavior might not be possible. Similarly, access to capital may ultimately yield responsible financial behavior, but that behavior may not specifically be the manifestation of financial knowledge. In fact, access to capital can mask the lack of financial knowledge as it may yield seemingly responsible financial behavior without the actor necessarily having financial knowledge.

In other words, while the lack of capital can prevent responsible financial behavior despite financial knowledge, access to capital may yield responsible financial behavior without the input of financial knowledge. The motivation for the behavior could be something different, however the access to capital still makes the behavior possible.

As such, the data indicate findings more profound than what was originally intended as the findings included but also moved beyond the realm of specific high need financial knowledge areas. Specifically, while women have some financial knowledge weaknesses—and these will be discussed in this chapter—a critical issue in the analysis of women's financial literacy is the definitional constraints of the functional definition of financial literacy, given women's unique role in society today. Because women have lower access to capital and capital is a critical input in the definition of financial literacy, some women face opportunity costs, and may also have redefined the concept of rational action when it comes to financial management. Given women's unique place in U.S. society, the accepted definition of financial literacy may not only be incomplete, but may have significant gender-related issues as it masks areas of women's financial knowledge and provides evidence that is not necessarily accurate.

The data analysis of the three stages of research yielded a series of categories related to the concept of an incomplete definition of financial literacy. For example, one finding was that women may face economic barriers to behaving in a financially responsible way. The issue in this case is not that there is a weak knowledge base about how to take care of oneself financially, but that financially responsible behavior may not be logistically possible due to a lack of sufficient funds. The lack of sufficient funds could be related to women's average lower income level, and increasing financial responsibility for their families.

The constructs of opportunity costs and rational actions were also discovered to be a related category to the incomplete definition of financial literacy. The idea is that while women might have sufficient financial knowledge to understand that financially responsible behaviors like investing and home ownership through mortgages are a good idea, some women may need to use the money for something else. Related to this analysis of opportunity costs is the idea that the women who participated in the focus group interviews might be exhibiting a different definition of *rational action* than is usually considered in economic reasoning.

These dynamics will be considered in detail in the next sections. This chapter is organized by the three stages of research analysis.

Stage One: Financial Literacy Survey Results for Women

Stage One of the research analysis yielded a financial knowledge area, based on the accepted definition of financial literacy, where women need greater understanding. Specifically, the knowledge-based findings were that women need a better understanding of the institutional operations and product functioning aspects of personal finance in order to be financially literate. This is a finding that could be supported even if access to capital is included in the financial literacy equation; in other words, the knowledge is not masked by a lack of access to capital, and may still be lacking if capital were more available to women.

Specifically, product functioning understanding is defined as how financial markets, products, and components function. Concepts that fall under this definition include the following: How do financial instruments work? How does a savings account work? How does social security function? Institutional operations understanding is defined as an understanding of how an institution operates in a financial transaction. Concepts that fall under this definition include the following: How do financial institutions work? What role does the government pay in taxes? In financial transactions, what is the institution responsible for and what does the government protect?

In grounded theory analysis, the main theme of the research that pulls the other categories together to form an explanatory whole is defined as the *central category* (Strauss & Corbin, 1998). Thus, the central knowledge-based category that emerged from the Stage One data analysis is the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. In this study, financial literacy has been previously defined as knowledgeable in the areas of managing money (including saving, budgeting, investing, credit, insurance, and taxes) and utilizing that knowledge to gain personal welfare through financial security.

Stage One was the beginning of the findings of a second central category that was not knowledge-based, but was definitional. The findings provided the first suggestion that the accepted definition of financial literacy is incomplete as it does not include the input of access to capital. This first stage indicated that the input of knowledge also needs to be accompanied by the input of access to capital to deliver the output of financial behavior to take care of oneself. Specifically, the first stage of analysis provided an indication that women may face economic barriers that prevent them from manifesting their financial knowledge in responsible financial behavior. The analysis yielded the proposition that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially.

These economic barriers may be a result of women being paid less than men for the same work, and moving in and out of the workforce more frequently than men, while still having financial responsibility for themselves and their families. Thus, the economic barrier prevents the financial knowledge from being acted upon, so that it appears from women's behavior that they are not financially literate.

This section will examine the Stage One research analysis, including the discovery of the central knowledge-based category, and the elaboration of financial properties. This section will also show how the concepts of product functioning and institutional operations financial knowledge are discovered and understood in the context of women's financial literacy. This section will also examine the first indication of the central definitional category, that the accepted definition of financial literacy is incomplete.

Product Functioning and Institutional Operations Understanding

This discovery of the central knowledge-based category, that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate, evolved out of an attempt to find out which specific categories of the six categories of financial literacy were women weak in. However, in the first stage of research that involved analyzing women's financial survey results (see Appendix 1 for a listing of the financial surveys, questions, and coding), the indication was that women struggled with concepts in all the categories of financial literacy defined earlier in this paper: budgeting, investing, credit, insurance, and taxes. No specific category stood out as a particular high need learning area for women. For example, every category was used at least once in a question where more than 70% of women answered the question incorrectly.

Categories are concepts that represent important analytic ideas that emerge from the data (Strauss & Corbin, 1998). The Stage One categories were developed based on the concepts that were covered in each survey question. The surveys were established to gauge women's financial literacy, and therefore utilized the pool of concepts that are generally accepted to define financial literacy. Additionally, as this research project is focused on discovering the areas of need for women's financial literacy, the categories utilized for the first level of comparison were the primary content areas of financial literacy as defined in Chapter 1 of this paper. These concepts are saving, budgeting, investing, credit, insurance, and taxes. For example, the survey question:

> "A stock mutual fund combines the money of many investors
> to buy a variety of stocks" (U.S. Federal Reserve, 2004)

was assigned the category of *Investing* because the content of the question related mostly to investing, including concepts like stocks, mutual funds, and investor. The question:

> "Your credit rating is affected by how much you charge on
> your credit cards" (U.S. Federal Reserve, 2004)

was assigned the category of *Credit* because the content of the question included concepts like credit rating and credit cards that are related to credit.

Table 4.1 below delineates the survey items that indicated a weakness in financial knowledge. The table shows that those items were classified in all six categories of financial literacy, and as such, did not provide any specific information about the areas of financial understanding where women might be lacking.

4.1 Financial Survey Questions that Indicate Areas of Weakness

Content Category	Survey Items Below 70%
Budgeting	FR26, NC6, HR3
Saving	NF1, NF2, FR11, HR1, HR2, HR4, HR6
Investing	FR12, FR13, FR15, FR27, NC3, NC4, NC5, NC8, NC9, HR5, HR7
Credit	NF4, NF6, NF7, NF8, FR2, FR4, FR5, FR7, FR10, FR23
Insurance	FR18, FR27
Taxes	FR6

The original purpose of the study was to explore the financial knowledge that women are lacking but need today, but the first approach of research analysis did not yield specific areas as the findings were so broad. It then became necessary to look at the survey results from a different perspective to find more specific areas of financial understanding. This next level of survey analysis involved deriving the embedded financial properties from the survey responses being analyzed.

The properties that were assigned to each question were specific to the question, and as such, each question that yielded the same category assignment did not yield the same set of properties. For example, the survey question which received less than 70% correct answers and was assigned the category of *Investing*:

> "With compound interest, you earn interest on your interest, as well as your principal" (U.S. Federal Reserve, 2004)

yielded the concepts: interest rates, compound interest, principal, components of a loan, and calculation of interest. At the same time, an additional survey question which received less than 70% correct answers and was also assigned the category of *Investing*:

> "Do you think that the following statement is true or false?: Buying a single company stock usually provides a safer return than a stock mutual fund" (University of Michigan, 2001)

but yielded the concepts: risk, return, and diversification.

The properties of the original series of categories were compared, and then re-grouped to relate categories at a dimensional level (Strauss & Corbin, 1998). These categories were meant to capture the finer layer of concepts that were eluding women in their financial understanding. Rather than looking for a large category like *Credit* as a basis for understanding or non-understanding, the re-grouping of categories from specific concepts was meant to find the subsets of concepts within *Credit* that might be generally more difficult for women to understand.

The comparison was focused on connecting the category properties on the basis of related financial concepts that formed a composite topic of finance understanding. For example, the concept *credit rating* included the following properties: credit counseling functioning, credit repair agency functioning, credit report components, credit report functioning, and credit rating components. The conditions for the grouping were not conceptual, like the broader meaning of *credit*, but had a more *functional* quality, meaning, how the concept is utilized, or manifests, in financial practice. For example, where the concept of *credit* has a broad meaning that can apply to a number of different areas within finance (see Appendix 4 for concept definitions), the functional topics divided the concepts into their functional manifestations, including mortgage functioning, credit cards, and credit rating. The choice of functional topics was related to the nature of the properties embedded in the survey questions. Most questions related to how consumers implemented financial actions and decisions, and how financial products worked.

When the list of properties from the survey questions was generated, it became clear that there were multiple properties embedded in each of the questions, and in the initial set of six financial literacy categories (saving, budgeting, investing, credit, insurance, and taxes). This phase of analysis yielded 58 properties, as opposed to the original six categories. As the properties were analyzed, it became clear that there was a trend in the types of financial knowledge that women are lacking. A trend that became evident from this phase of analysis was that the areas of understanding of product functioning and institutional operations in personal finance, as defined above, were areas of financial knowledge that women might be lacking.

Table 4.2 below shows a listing of the 58 properties generated in this phase of analysis. These properties that were embedded in the survey questions are cross-referenced in the table below with the financial literacy categories in which the survey questions were originally classified under in Table 4.1. For example, the survey question which received less than 70% correct answers and was assigned the category of *Investing*:

> "With compound interest, you earn interest on your interest, as well as your principal" (University of Michigan Survey of Consumers, 2001)

yielded the properties: compound interest, principal, components of a loan, and interest rate calculation. These properties are listed under the *Investing* category in the table below.

Upon initial reflection of the new set of categories, the re-categorization seemed to yield information that was as broad and non-specific as the initial groupings of categories. However, upon continued analysis and consideration over time, this phase of analysis indicated a nascent pattern within the type of financial information that women struggled with. The properties in Table 4.2 show the beginning of a trend in the understanding of product functioning and institutional operations. The property grouping includes both product functioning properties like checking account functioning, interest rate functioning, and life insurance functioning. The property grouping also includes institutional operations properties like the role of banks with banking services, consumer responsibility, and the role of the federal government in investing.

4.2 Financial Survey Development of Properties, continued on the next page

Content Category	Properties
Budgeting	Checking account functioning Definition of overdrawn Role of banks with banking services Consumer responsibility
Saving	Importance of a financial cushion Budgeting Interest rates Compound interest Principal Components of a loan Interest rate calculation Debt functioning Budget functioning Retirement savings functioning Social security functioning Time value of money functioning
Investing	Regulation of investments Regulation of banks Role of federal government in investing FDIC insurance functioning Consumer responsibility Mutual fund functioning Investment return Risk Nature of investing Stock returns Historical returns for an asset class Foreign exchange valuation Role of stock market Role of inflation in investing Interest rate functioning Investment functioning Diversification
Credit	Importance of home ownership Mortgage functioning Interest rates Loan components Loan functioning Credit scores Importance of credit score

	Consumer responsibility Credit score components Credit card components Credit card functioning Credit Compound interest Savings account functioning Credit repair agency functioning Credit report functioning Refinancing functioning Loan fee functioning
Insurance	Life insurance functioning Whole life insurance functioning Term life insurance functioning
Taxes	Credit counseling function Income tax Income tax refund Role of the federal government in taxes

Upon continued analysis and consideration over time, this phase of analysis seemed to indicate the possibility of a theme in the research that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. When the survey questions which received less than 70% correct answers were analyzed through the lens of what a person would need to be taught in order to answer the questions correctly, the product functioning and institutional operations theme became even more apparent. This next phase of analysis yielded product functional and institutional operations properties including: social security functioning, investment return functioning, the role of the bank with banking services, and mortgage functioning. Table 4.3 below indicates the properties that were discovered in this phase of analysis. The new set of properties are cross-referenced in the table below with the financial literacy categories in which the survey questions that yielded the properties were originally classified under in Table 4.1.

4.3 Financial Survey Development of Product Functioning and Institutional Operations Properties

Content Category	Product Functioning Category	Institutional Operations Category
Budgeting	Debt functioning Social security functioning	Role of the bank with banking services
Saving	Importance of saving Compound interest functioning Social security functioning	
Investing	Investment return functioning Foreign exchange valuation functioning How inflation impacts valuation Mutual fund functioning	Role of the federal government in investing Consumer responsibility with contracts Role of the stock market
Credit	Importance of home ownership Mortgage functioning Credit score functioning The cost of credit	Consumer responsibility with credit cards How credit repair agencies function
Insurance	Life insurance functioning	
Taxes		Role of the federal government with taxes

The following table provides a listing of the survey questions with lower than 70% accuracy in the responses, and shows how the questions were classified under product functioning understanding and institutional operations after the property designation. Each question in Table 4.4 below yielded one of the properties in Table 4.3 above. Some of the questions yielded the same property.

4.4 Financial Survey Designation of Areas of Weakness Categorized by Product Functioning and Institutional Operations

Content Category	Product Functioning	Institutional Operations
Budgeting	FR26, NC6, HR3	FR26
Saving	NF1, NF2, FR11, HR1, HR2, HR4, HR6	
Investing	FR13, FR15, NC3, NC5, NC8, NC9, HR5, HR7	FR12, NC4
Credit	NF4, NF6, NF7, NF8, FR2, FR4, FR5, FR23	FR7, FR10
Insurance	FR18, FR27	
Taxes		FR6

The properties grouped in Table 4.3 can be viewed in relation to the specific survey questions in Table 4.4. For example, in this phase of analysis, the following question yielded a functional property interpretation:

> "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: more than $102, exactly $102, less than $102?" (University of Michigan, 2004)

The properties that this question yielded are compound interest functioning. While knowledge of mathematical computation is necessary to answer this question correctly, an understanding of how interest functions – meaning, how interest is calculated and accumulates over a time period – is imperative even before mathematical computations enter into the solution

Additionally, the following question yielded an institutional operations and a product functioning property interpretation:

> "Your bank will usually call to warn you if you write a check that would overdraw your account." (University of Michigan Survey of Consumers, 2001)

This question yielded the property role of the bank with banking services. The knowledge required to answer this question correctly is about how banks operate, which is institutional operations knowledge.

Economic Barrier and Financial Literacy Definitional Issues

Stage One indicated the beginning of an understanding of a central definitional understanding, that the definition of financial literacy is incomplete because it does not include access to capital as an input. The indication was the discovery of the related category of an economic barrier - which may be access to capital - may be preventing the link between financial knowledge and responsible financial behavior that together yield the accepted definition of financial literacy. This related category yielded the proposition that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors. For example, even if women have the financial knowledge needed to make responsible financial decisions, like having savings for a financial cushion, or saving for retirement, they may not have the economic means to do so given their relatively lower income, single head of household status, and pattern of going in and out of the workforce (Pew, 2009).

For example, 94% of women respondents answered the following question correctly with a *True* response:

> "You should have an emergency fund that covers two to six months of expenses." (University of Michigan Survey of Consumers, 2001)

which indicates that women have strong knowledge about the importance of saving. However, only 64% of women respondents answered *Yes* to the following question:

> "Do you have any savings, excluding retirement savings?" (National Foundation for Credit Counseling, 2009)

This contradictory data implies that while women may have the appropriate financial knowledge regarding saving and a financial cushion, they are not engaging in the behavior that would be the expected manifestation of that knowledge given the acknowledged connection between knowledge and behavior in the accepted definition of financial literacy. As the women are not engaging in the behavior, they do not appear to be financially literate.

Summary of Stage One Analysis

The Stage One research analysis involved the analysis of financial properties embedded in financial survey questions in order to begin to discover specific areas of weakness in women's financial knowledge. Through this re-examination, a theme of types of financial knowledge was discovered: product functioning and institutional operations. As such, this stage yielded the central category that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate.

There was also an indication in this stage of analysis that the weakness in women's financial literacy may not be a result of a lack of knowledge. Rather, women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially. But in some cases, women may face economic barriers to engaging in the behavior that demonstrates that knowledge, and enables them to take care of themselves financially. This discovery in Stage One yielded the beginning of the findings that suggested that the definition of financial literacy as defined by inputs (financial knowledge in the six subject areas) and outputs (financial behavior to take care of oneself) may be incomplete as it does not include access to capital as an input.

Financial literacy is defined in this study and in the literature as being knowledgeable in the areas of managing money (including saving, budgeting, investing, credit, insurance, and taxes) and utilizing that knowledge to gain personal welfare through financial security. This first stage of research analysis indicated the possibility that the accepted definition of financial literacy is flawed if one of the indicators is the output of utilizing financial knowledge to gain personal welfare through financial security. The definition might be incomplete because the utilization of financial knowledge to gain personal welfare through financial security requires access to capital. The knowledge cannot be utilized to gain financial security without sufficient capital, and there are economic barriers that may be preventing some women from accumulating that level of capital.

Stage Two: Areas of Women's Financial Behavior

The Stage Two analysis of the research involved the information gained from the analysis of women's financial behavioral statistics (see Appendix 2 for a list of the sources of statistics for data collection and coding of those behaviors). The key findings from Stage Two of the research analysis include the central knowledge-based category that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. In the Stage Two analysis, the product functioning and institutional operations weakness was particularly pronounced in the Mortgage-related and Investing areas. A second key finding in Stage Two is the central definitional category, that the definition of financial literacy is incomplete as it does not include the input of access to capital.

For the Stage Two analysis, statistical information from studies that examined financial behavior was examined. The financial behavior statistics indicated that women's financial behavior was strong in some areas and weak in others. Table 4.5 below indicates the areas of strength and weakness in women's financial behavior.

4.5 Financial Behavior Strengths and Weaknesses

Financial Behavior	Category	Strength	Weakness
FB1. Income	Budgeting	X	X
FB2. Savings rate	Savings		X
FB3. Retirement savings	Savings		X
FB4. Home ownership	Credit	X	
FB5. Mortgage loan default	Credit		X
FB6. Mortgage foreclosure	Credit		X
FB7. Credit rating	Credit	X	
FB8. Participation in the stock market and other investments	Investing	X	X

Another finding in Stage Two was the concept that women's weakness in product functioning and institutional operations understanding could be a result of their shorter-term experience in having independent income and making independent financial choices. For example, women did not have the same access to jobs and careers as men or the same pay until government policy actions in the 1960s, although equal access for women in the workplace remains a struggle to this day (Secor, 2008). Additionally, it was not until 1974 that the Equal Opportunity Act made it illegal to discriminate in terms of credit opportunities based on gender, among other things. Until this time, women's creditworthiness and access to credit was largely based on their husband (Secor, 2008).

The Stage Two analysis also confirmed the related category which is an economic barrier that prevents women who might have sufficient knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, including investing in risky, higher performing assets and saving for retirement. A finding in the Stage Two analysis provided additional information in the understanding of the economic barrier concept. Specifically, findings demonstrated the concept that given women's lower average life income, their life priorities and necessities may require them to engage in behaviors, including not saving as much for retirement as men, that appear to not be financially literate but may be due to a lack of access to sufficient capital.

The findings of the Stage Two research analysis also helped frame the economic barrier and access to capital issue in terms of the opportunity costs that women face. Given women's lower access to capital, their apparently non-financially literate behavior could be viewed as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities for spending a smaller salary. This is a different idea than if women had sufficient capital to save and invest, and they were choosing not to do so.

This section will examine the findings that evolved from the analysis of women's financial behaviors. It will include an examination of the central categories and related categories that evolved from the data analysis.

Product Functioning and Institutional Operations Understanding

The findings in the Stage Two research yielded the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. As in the examination of a broader array of financial concepts through the analysis of properties embedded in the survey results of Stage One, the examination of the properties embedded in the financial behaviors examined in Stage Two began to yield results that supported the central knowledge-based category of product functioning and institutional operations knowledge weakness in women.

For example, in the financial behavior of Mortgage Loan Default, which included a higher rate of default for women and a higher rate of sub-prime mortgages for women, the examination of properties embedded in those behaviors yielded product functioning properties including mortgage functioning and ARM functioning. Because women have a high rate of mortgage loan default, it appears that women may have difficulty understanding how different types of mortgages function.

For the behavior of Participation in the Stock Market and Other Investment, which included the data that women tend to take less risk in investing to their disadvantage, the examination of properties embedded in those behaviors yielded product functioning properties including nature of investing and investment functioning. Because this is an area of weakness for women, it appears that the knowledge weakness may be product functioning. These types of results support the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. Table 4.6 below shows the properties embedded in the financial behaviors examined in Stage Two, cross-referenced with the financial literacy categories.

4.6 Financial Behavior Development of Properties

Content Category	Properties
Budgeting	Income functioning Budget functioning
Saving	Saving functioning Budget functioning Importance of financial cushion Saving functioning Investing Budgeting for retirement Retirement saving functioning Importance of retirement saving Compound interest functioning
Investing	Investment return functioning Risk Historical returns for an asset class Nature of investing Investment functioning Stocks functioning Diversification
Credit	Mortgage functioning ARM functioning Mortgage components Budget functioning
Insurance	N/A
Taxes	N/A

As in the Stage One research analysis of survey results, the statistics of women's financial behavior trends were also analyzed from the perspective of what would need to be taught to someone who indicated a lack of financial understanding in the areas of weaker financial behaviors. As with the Stage One analysis, the analysis yielded a trend of a weakness in the product functioning and institutional operations understanding of personal finance, particularly in the Mortgage-related and Investing areas. For example, the Mortgage Loan Default behavior yielded product functioning and institutional operations properties including mortgage functioning and consumer responsibility. Mortgage functioning is a product functioning property, and consumer responsibility is an institutional operations property in the sense that the consumer and the lender both have prescribed responsibilities given how the institution and the market operate. Table 4.7 below indicates the production functioning and institutional operations properties that were embedded in the financial behavior statistics. The properties are cross-referenced with the financial literacy categories from the original behavior category classification.

4.7 Financial Behavior Development of Product Functioning and Institutional Operations Properties

Content Category	Product Functioning Category	Institutional Operations Category
Budgeting		Knowledge of job market
Saving	Financial cushion importance Retirement saving functioning	
Investing	Investment functioning	
Credit	Mortgage functioning	Responsibility of the consumer with mortgages Role of the bank with mortgages
Insurance	N/A	N/A
Taxes	N/A	N/A

Each financial behavior in Table 4.8 below yielded one of the properties in Table 4.7 above. Some behaviors yielded the same property.

4.8 Financial Behavior Areas of Weakness Categorized by Product Functioning and Institutional Operations

Content Category	Product Functioning	Institutional Operations
Budgeting		FB1
Saving	FB2, FB3	
Investing	FB8	FB8
Credit	FB5	FB6
Insurance	N/A	N/A
Taxes	N/A	N/A

Additionally, in the financial behavioral areas of Mortgage Loan Default and Mortgage Foreclosure, the financial knowledge that might be lacking in this case could be product functioning and institutional operation, for example not understanding what happens if payments are not made each month, or how to approach a lender or find a government program to help if the monthly mortgage payments are not affordable. Additionally, the financial behavior data revealed that women had a higher percentage of sub-prime mortgages than men with similar credit scores (Center for Responsible Lending, 2009), which could imply that women do not have the same operational understanding of the mortgage market. The credit score similarity implies that women otherwise know how to manage credit as well as men do, but there seems to be a gap in knowledge for women regarding mortgages and mortgage market operations.

The analysis of the Investing behavior from the perspective of what would need to be taught to someone who lacked information in this area, yielded investment return functioning, which relates to an understanding of how investments function. This area can include issues like diversification, and risk-and-return relationships, where women seem to lack understanding.

Experiential Differences

The Stage Two research analysis began to connect the concept of product functioning and institutional operations understanding to experience. It has been demonstrated that women have less experience in the workforce, and with independent forms of credit (Secor, 2008). As such, it would follow that with less experience in personal finance, the understanding of how the markets and institutions – along with the different participants in the transactions – operate or function might be weaker than if there were more experience. Thus, the proposition yielded in this stage of analysis is that women's weak product functioning and institutional operations understanding of personal finance is related to their lack of experience in the independent practice of personal finance.

This discovery of the experiential trend occurred in some of the financial behaviors that happened to demonstrate both weaknesses and strengths for women. These contradictory areas as such pointed to a product functioning deficiency in women's financial knowledge, as well to some of the related categories mentioned above. Regarding the financial behavior of Income, while women between the ages of 30 and 44 are paid 71% of what men are paid for the same job, women's incomes are growing at a faster pace than men's (Pew, 2009). The income differential might point to the idea that historically women have been discriminated against in the workforce. Also, women have less experience in the workforce, which could mean that women are less well-versed in how to negotiate a salary, the idea that they can ask for money than they are being offered, or the knowledge of how to do a broader market analysis for salaries. While this behavior might demonstrate a functional lack of understanding, it also supports the idea that women have less experience over time with financial areas as they had financial independence and responsibility for a shorter period than men (Secor, 2008).

Financial Literacy Definitional Issues

The research analysis in Stage Two confirmed the central definitional category that the current understanding of financial literacy is incomplete because it does not include the input of access to capital. The primary issue with the definition of financial literacy and women is that financial literacy is defined by inputs (financial knowledge in the six previously defined subject areas) and outputs (financial behavior to take care of oneself). Financial literacy is defined in this study and in the literature as being knowledgeable in the areas of managing money (including saving, budgeting, investing, credit, insurance, and taxes) and utilizing the knowledge to gain personal welfare through financial security. However, the problem is that the definition of financial literacy assumes that along with the impact of knowledge, there is also an input of access to capital to deliver the output of utilizing knowledge to attain financial security. However, knowledge cannot necessarily be utilized to gain financial security without sufficient capital.

As the findings continue to be uncovered, the definitional issue related to financial literacy seems to be based primarily on women's unique place in U.S. society. As such, it may be the case that the accepted definition of financial literacy has significant gender-related issues. Given women's unique place in U.S. society in this era, it may be that women may not have access to the capital that is required to meet the behavioral aspect of the current definition of financially literate. It may be that the current, accepted definition of financial literacy does not include the strategies that woman might need to employ in her and her family's financial management, given her limited financial resources.

Economic Barriers to Financial Literacy

Stage Two of the research analysis supported the related category that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors.

The income statistic that shows women between the ages of 30 and 44 are paid 71% of what men are paid for the same job (Pew, 2009) provides ballast for the related category of economic barriers. This statistic would indicate that if women are making 71% on average of what men are making overall, it would follow that women would have lower savings and retirement savings as they have less money overall to manage. In other words, with lower incomes, they may have less capital available for savings of all kinds, or other financially literate behaviors.

The Mortgage Default behavior also supports the related category of economic barrier. With lower incomes, women might not be able to afford the same mortgage payments as men, so may have a higher rate of default for that reason, especially if they have a mortgage structure where the monthly payments increase substantially over time.

Other trends in the data also point to the supporting category of economic barrier. While women's savings rate is low, which could imply issues with budgeting, their credit scores are higher than men's, which implies bills are paid on time and credit is managed, which implies budgeting prowess. The issue may be that while women are responsible in the area of budgeting and paying bills on time, they may not have sufficient income to apply it to savings, after having applied it to more immediate areas of expenditures.

Opportunity Costs

Upon further examination of the economic barrier issue, additional findings in Stage Two of the research analysis yielded the proposition that women's life priorities and necessities may require them to engage in behaviors, including not making as much income as men, that appear to not be financially literate. The economic barrier issue of lower income with necessary expenses is a piece of this puzzle. But the more detailed picture is that women are making choices - possibly out of necessity - with a full understanding of what their financial behaviors will yield. This apparently non-financially literate behavior could be articulated as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities in their financial lives. These opportunity costs are exacerbated by women's possible lower access to capital; the more scarce the resources, the more choices one has to make, including more sacrifices.

The Income area of behavior is an example of the opportunity costs concept. Because of the difference in life directions and responsibilities of men and women, women tend to move in and out of the workforce more frequently than men (Pew, 2009), which could mean they do not build up the same level of experience, or start over with new employers more frequently than do men. These issues may also contribute to women making less money than men (Leonhardt, 2010). While women may understand the importance of income level, especially as it relates to the ability to take care of themselves in the present as well as save for the future, they may have a different set of life priorities – or necessities – like caring for children, that require them to engage in employment behaviors that may ultimately yield a lower salary for the same job. But at the same time women make the choice with the full understanding of what that behavior will yield, and they suffer the opportunity cost because of the choice they were obligated to make.

Regarding the Investing area of financial behavior, the initial studies that highlighted women's inferiority in that area looked at their lack of investment savvy as it pertained to retirement savings (Lusardi & Mitchell, 2008). For example, in these studies women invested less money in stocks and other high-risk investments, which yielded a lower return and thus lower level of retirement savings over time. Based on the link between knowledge and behavior, this behavior implied that women did not know enough to invest in higher risk assets, while conversely, men did have the right knowledge to behave in a financially literate manner. But research shows that this may be a case where access to capital yields financially responsible behavior without that behavior being a manifestation of financial knowledge. The motivation for the action of investing in risky assets may be something else entirely.

For example, there are studies that show that men are more *confident* investors, but not necessarily more *competent* investors than women (Barber & Odean, 2001). In other words, men's decision to invest in risky assets may not necessarily be based on the knowledge that they might ultimately yield a higher return, but a general level of confidence that may or may not be supported by successful investing. At the same time, women's failure to invest in riskier assets may be due to a lack of knowledge, or that failure may not be due to a lack of knowledge but a fear of losing money, or a necessity to hold on to money. This could be related to women's increasing level of financial responsibility combined with a lower access to income, which might mean they might have less of a financial cushion to absorb investment losses without threatening their family's financial livelihood. In other words, investment choices involving higher levels of risk may appear to be based on financial knowledge, but may in fact be based more on access to capital which yields a higher level of comfort with risk and potential financial losses.

This idea that men's desire to invest in riskier assets may have more to do with a preference for risk-taking, or having more money to spend and thus to lose, than a stronger knowledge base has been borne out in the research (Barber & Odean, 2001). Additionally, while investing in riskier assets may, over time, yield a higher return, it is not always the safest approach to investing. One study showed that on a professional level, women hedge fund managers outperformed men in the recent financial crisis because they had invested more conservatively ahead of the crisis than men did, which proved to be the savvier investment strategy given the investment environment at the time (Arnst, 2009).

Summary of Stage Two Analysis

Stage Two of the research analysis indicated that a central knowledge-based category that women may need additional product functioning and institutional operations personal financial knowledge in order to be financially literature, particularly in the areas of Mortgages and Investing. The proposition was further articulated as women's weakness in product functioning and institutional operations understanding could be a result of their shorter-term experience in having independent income and making independent financial choices.

The Stage Two findings also supported a central definitional category that the definition of financial literacy is incomplete because it does not include the input of access to capital. Given women's unique place in U.S. society, the accepted definition of financial literacy may not only be incomplete, but may have significant gender-related issues.

The Stage Two analysis also supported the related category of an economic barrier that prevents women who might have sufficient knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, including investing in risky, higher performing assets and saving for retirement. A finding in the Stage Two analysis suggested that given women's lower average income, their life priorities and necessities, and in general their lower access to capital, may require them to engage in behaviors, including not saving as much for retirement as men, that appear to not be financially literate.

The findings of the Stage Two research analysis also helped frame the economic barrier issue in terms of the opportunity costs that women face. Given women's lower access to capital, their apparently non-financially literate behavior in some cases could be viewed as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities. This is a different idea than if women had sufficient capital to save and invest, and they were choosing not to.

Stage Three: Focus Group Interviews with Women in Financial Literacy Classes

Stage Three of the research analysis involved focus group interviews with women participating in financial literacy classes. The key findings from Stage Three of the research analysis included a confirmation of the central knowledge-based category which yielded the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. In the Stage Three analysis, the focus group interviews indicated that women had a strong functional understanding of the areas of budgeting, saving, credit, and taxes, but a weaker product functioning and institutional operations understanding of mortgages and investing. Another finding in Stage Three that echoed that of Stage Two is the concept that women's weakness in product functioning understanding could be a result of their shorter-term experience in having independent income and making independent financial choices.

Stage Three also supported the central definitional category that the accepted definition of financial literacy is incomplete as it does not include the input of access to capital. The Stage Three analysis provided support for the proposition that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors. This finding was particularly acute in relationship to mortgages and retirement savings.

Another finding that came out of the Stage Three research analysis was the proposition that women's life priorities and necessities may require them to engage in behaviors, including not making as much income as men, that appear to not be financially literate. This dynamic could be viewed as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities with the decision made with the full understanding of the financial consequences. Finally, the Stage Three research analysis yielded the proposition that women might be exhibiting a different definition of rational action than is usually considered in economic reasoning in that maximizing their utility might not mean saving for their retirement or the future, but using their capital to care for their family.

This section examines women's understanding of the broader financial categories included in the working definition of financial literacy. It will involve a discussion of both strengths and weaknesses in women's financial understanding.

Understanding of Broader Financial Categories

The interview questions were framed in part by the initial analysis of the categories in the first two stages of the research. However, there were also open-ended questions to allow the interviewees to offer opinions, themes, and categories apart from those developed in the earlier stages of research. Because the first two stages of research in this study yielded clear and consistent propositions, the Stage Three research was focused on the comparison of women's financial knowledge experiences with the propositions that had already evolved. Based on the evolution of concepts in the first two stages of research, the questions were centered around the categories of budgeting, saving, credit/mortgage, and investing. The focus group interviews yielded an understanding of the overarching concepts of budgeting, saving, credit, taxes, and investing in general.

<u>Budgeting.</u> For example, when asked what budgeting is, respondents said:

> "A list of bills and a list of income and outgoing finances."
>
> "Some people might do it by what they make a year."
>
> "Something that you plan and stick to it."
>
> "[It is set up] according to your income each week or month."
>
> "So you can keep track of your funds."
>
> "So you can know what you can afford pretty much and what you can't."

These responses demonstrated a clear understanding of the definition of a budget, as well as how it functions in a person's financial life.

<u>Saving</u>. When asked a follow-up question regarding the purpose of savings, the respondents said:

"Rainy day…car repair."

"Emergency."

"Unexpected expense."

"Uncommon event"

"A vacation."

A second follow-up question regarding how savings is accumulated yielded the following responses:

"Direct deposit directly in a savings account."

"You have to add it to what you're budgeting; account for it."

Their responses demonstrated a clear understanding of the definition of savings as well as the purpose or function of savings.

Credit/Mortgage. The women focus group respondents demonstrated a very keen understanding of credit in their responses. When asked how credit works, and what credit is, respondents answered:

"Buy now, pay later."

Respondents also understood that credit can be a negative in a person's life, when not managed properly, even if a bad experience with credit is an anomaly

"Sometimes there can be a bias because bad things happen to good people and they say ah…I'm not going to take a risk on her and that could be who you had been then, in a certain situation."

The respondents also understood how to apply for a credit card, and that credit is readily available in current times. When asked how and where to get a credit card, the responded:

"Just apply…nowadays."

"Banks, department stores."

They also demonstrated an understanding of how to access their credit scores.

> "I went online, I went to find my credit score. I was trying to get my credit together and everything. I was so excited because I done got everything paid off so now I'm excited. I can get the credit and the score all at once. I went online and I looked it up. What you do is you apply for the mortgage and they will give it to you for free – the credit report and the score."

One respondent also discussed her experience with her daughter dealing with a credit card company that may not have been as clear about its policies as consumers would like or need. She explained her response to the issue, given the resources she had available.

> "My oldest daughter, she got one of those tricky credit cards where they gave you $300 and all of a sudden you owe $3,000. And so at one point they were calling, calling, calling…Are you her mother? Yes I am. Well could you tell her she needs to pay this bill? He was going on and on. I said no, I'm not going to tell her that. I said if she sent you $300 in March, that's what you gave her. Close up the file and call it a day – all the excess fees and stuff don't make sense. So this man said to me, well what kind of mother are you? I said, I'm going to tell you what kind I am. Right now, [my daughter] is 19, I'm going to tell her to go file bankruptcy. By the time she's 29, she will have a fresh start. How about that? Well of course he hung up the phone, and that was the end of that."

However, there seems to be less of an understanding of the formal processes of investing and mortgages – including the potential return based on accumulated earnings and compound interest, even if the initial amount invested is not very big.

Regarding mortgages, many of the women in the group said they were in the financial literacy class to learn about mortgages, as part of a requirement of a mortgage lending program they were participating in. They implied that they did not know much about mortgage borrowing. One of the focus group respondents seemed to have a very strong understanding of mortgages, providing this answer to the question of what is a mortgage:

> “A mortgage is a large sum of money that you have taken out and invested in this house.”

However, that same respondent then went on to tell her personal story about a mortgage that she had borrowed, and how the fees at the closing were much higher than she expected, and the other was a floating rate mortgage that eventually became too expensive for her to afford to pay. At the same time, she had a very strong present-day understanding of her mortgage functioning, as well as the government mortgage loan modification program.

Additionally, the focus group respondents had a discussion about owning a home with a mortgage versus renting, which seemed to yield a broader understanding of mortgages and what they really imply about home ownership:

> “Because when you look at it, you think you own your car or you own a house. You don’t own it because if you don’t make a payment, they take it. You don’t own it…It’s just like rent – they just got a different name for it.”

At the same time, the analysis implied in the statement above seemed to ignore the function of a mortgage as an investment, as well as the way that values fluctuate in the real estate market. This represents a weakness in the product functioning and institutional operations understanding of the role of a mortgage in a real estate investment. The following quote echoed that sentiment:

> “Well I never wanted a house personally. That has never been my dream. Never

> ever wanted and I still don't. I know that it's an investment, a good thing to invest in, but I still don't…I look at it like this. You're in an apartment, the ceiling breaks. I'm not responsible. You don't have to run out to the bank. I don't have to worry about it. I just call the landlord."

Another respondent discussed the economic barriers to home ownership. For example,

> "I calculated [my annual rent payment]. I'm like, hold up, I'm giving you almost ten grand a year? Hold up, I got to find me a house. First-time homebuyer's class. I did all these things to clear up my credit. But then the ceiling went. A big hole in the ceiling. I said, hmmm… I don't have the money."

<u>Investing.</u> The focus group respondents seemed to have less knowledge about investing. When asked what is investing, the primary response was:

> "That if you don't have a lot to put in there, it's not worth it."

The respondents did not seem to understand how financial markets work, or have basic information on consumer products like stocks, bonds, or mutual funds. However, they did express an interest in learning more about investing. When asked what might be the best way to invest, one respondent replied:

> "I would invest in property…I guess when I look at investment, I look at that if you invest in the stock market you are taking a chance that you are going to lose your money. Property, you aren't going to lose your money. It may lose value."

This response seemed to indicate the belief that a stock's value might go to zero, or at least not maintain its value as well as property, which is not necessarily the case.

The focus group members also expressed concern that investing did not yield high enough returns to take much-needed money out of household circulation. For example, "It's not so much what it is, but you would think that you're going through the everyday struggle if you are going to put away $1000 in a year that you want at least $500. It doesn't work that way – you're only going to get $20, so you know…"

In the follow-up focus group interviews, when asked specifically about where the participants' shortcomings are in regard to investing, these two answers were given:

"I wouldn't know pretty much where to go and how to do it."

"Honestly, I don't think it would be worth it. I don't actually think it would be worth it. Because if you had $1000 and they're only giving you 1%."

When asked specifically about retirement savings, the focus group respondents seemed to have an understanding of some different institutional mechanisms for retirement savings. They did not seem to know much about the possibility for pre-tax contributions to retirement through specific plans. However, there seemed to be widespread agreement among the group that retirement saving was not possible given the women's current level of income and expenses. For example, when asked if retirement savings was important, one focus group participant responded,

"Not right now."

And another respondent added:

"It is important but a lot of people can't save for it. It's what she said."

"I just have $10 come out of my check. That's what I can afford."

At the time, while there did not seem to be much product functioning or institutional operations understanding of investing in financial markets, there did seem to be a broader understanding of the concept of investing, meaning, spending money on something with a certain amount of risk, in hopes to earn a financial return at a later date.

For example, which asked about what might be a good or safe investment, one focus group participant said:

> "It's usually your children…like I'm invested in my son's education…because I'm putting him through college."

When asked to describe why she calls that an investment, the respondent replied:

> "My son plays basketball. He has the opportunity to play professional basketball and he will get paid a lot of money."

When asked by another respondent if she had a house, the respondent replied:

> "No, I don't. That's why I'm investing in my son. If it works out I can get me a house."

These responses indicated that the focus group participant understood the broader concept of investing – spending money on something that is not guaranteed, in hopes of receiving a financial return. It also appears that she had done long- and short-term risk-and-return analysis, and had determined that investing in her son's education would have a superior return to investing in a home. These ideas seemed to indicate a broader conceptual understanding of investing.

<u>Taxes.</u> The focus group respondents seemed to have a strong understanding of taxes. An impromptu discussion about taxes arose without any specific questions on the subject, and the respondents seemed to have a strong understanding of how income tax worked, as well as some knowledge about more sophisticated concepts like generation-skipping tax shelters related to the inheritance tax.

> "You know what I just found out and I hope I explain this correctly. The rich people…say you have money that's in your family. Instead of leaving it to your

son you leave it to your grandson and you don't get taxed on it. Or you just use the interest that you earned off that account and you don't get taxed on it. It's like that's how they stay rich and continue to be rich."

Product Functioning and Institutional Operations Understanding

The research analysis done in Stage Three of this study supported the central knowledge-based category that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate, and focused that proposition to include the specific areas of financial understanding where women might need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. Specifically, based on the interview responses, the focus group participants seemed to have a weaker product functioning and institutional operations understanding of mortgages and investing.

So while the women interviewed seemed to have a broader and fairly keen understanding of the conceptual definitions of investing and mortgages as indicated in the excerpts above, they did not seem to have as strong an understanding of how the related products function, or about the institutions required for their operation.

Additionally, the focus group participants did not seem to understand the concepts related to how mortgages and investing can yield value and build wealth, which can also be viewed as functional understanding. While the expenses of maintaining a house may be high at times, the analysis of the value of home ownership requires understanding essentially how real estate investing functions, and requires an understanding of real estate fluctuations over time, as well as an analysis of the net gains that can result from home ownership and all that factors into it. Similarly, while the return on investing might seem low and risky when viewed on a short-term basis, understanding how a diversified portfolio of investments can have a lower risk profile and a valuable return over time based on compound interest and other gains, requires the understanding of how investments function.

Mortgages and investing not only involve more multi-dimensional consumer products and require the understanding of complicated conceptual analysis in their successful product functioning. Additionally, mortgages and investing involve multiple institutional partners, which requires an institutional operations understanding of financial institutions and markets, as well as laws related to consumer protection and the banking industry.

Another finding in the Stage Three research was that the focus group interviews expressed a strong functional understanding of the areas of budgeting, saving, and credit, as indicated in the excerpts above. This finding yielded the construct of a literacy regarding home financial management versus institutional financial management, meaning that budgeting, saving, and some areas of credit fall into the type of personal financial management that can be done simply in the home without much institutional institutional operations knowledge.

Experiential Differences

As in the Stage Two research analysis, the Stage Three research analysis began to connect the concept of product functioning and institutional operations understanding to experience. As such, the Stage Three analysis supported a related category that was developed in the Stage Two analysis, which is the proposition that women's weak product functioning and institutional operations understanding of personal finance is related to their lack of experience in the independent practice of personal finance.

The women's focus group interviews, with excerpts above, seemed to indicate that women had a stronger product functioning understanding in the areas of budgeting and savings. These are areas that have typically been women's financial domain within the family. However, women have had financial independence and responsibility for a shorter period than men (Secor, 2008), which means less time with access to more complicated financial products like investments and mortgages.

Financial Literacy Definitional Issues

The Stage Three research analysis supported the central definitional category that the accepted definition of financial literacy is incomplete because it does not include the input of access to capital. The Stage Three research analysis provided clear support for the idea that the input of knowledge also needs to be accompanied by the access to capital to deliver the output of financial behavior to take care of oneself. Otherwise, even if one has the necessary financial understanding to take care of oneself financially, they cannot do so without sufficient capital.

The focus group interviews with women in the Stage Three research provided strong support that the definitional issue related to financial literacy seems to be based primarily on women's unique place in U.S. society. While the women who participated in the focus group interviews indicated that they understood how to take care of themselves financially, they did not have the access to income to participate in all of the activities that make up the accepted definition of financial literacy. Given this support, it appears that the accepted definition of financial literacy has significant gender-related issues. Stage Three also yielded results that supported the proposition that the current, accepted definition of financial literacy needs to broaden to include the strategies that woman might need to employ in her and her family's financial management, given her limited financial resources.

Economic Barriers to Financial Literacy

The Stage Three data analysis supported the proposition that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors. For example, as indicated in the interview excerpts above, some focus group respondents discussed being unable to engage in home ownership through a mortgage because they could not afford to maintain the home. Additionally, one respondent who did have a mortgage could no longer afford the payments because of the rising interest rates on her second mortgage.

Home ownership also seemed to be perceived by some respondents as either too expensive because of the cost of repairs (compared to not having to shoulder the cost of repairs in a rented home), or as not a good investment because of the amount of money needed to keep up with mortgage and repairs while that money may be needed for other expenses.

Retirement saving also seemed to be viewed by some respondents as worthwhile, but not affordable at the current time. When discussing the topic of retirement saving, a couple of participants basically said something to the effect of "not right now." In the follow-up focus group interviews, when asked specifically if the participants were not saving because they did not think it was a good idea, or because they need to use their money to take care of other business, one respondent agreed with the latter idea.

Opportunity Costs

The Stage Three analysis supported the finding that women's life priorities and necessities, and lack of access to capital, may require them to engage in behaviors, including not making as much income as men, that appear to not be financially literate. The research findings in Stage Three seemed to indicate that the economic barrier issue of lower income with necessary expenses is only part of the dynamic. But the more detailed picture is that women are making choices - possibly out of necessity - with a full understanding of what their financial behaviors will yield. For example, while women might have sufficient financial knowledge to understand that investing and home ownership through mortgages are a good idea over the long-term, in the short-term they need to use the money for something else. Because they have lower access to capital, they have to make the choice that may seem to be less financially literate.

What this means is that the women are not willing to pay the opportunity cost of investing the money, or putting the money into a house, when they have other immediate need for the money. One indication of this concept was the discussion excerpted above about investing not being attractive because the return on the investment was so low, and as such did not outweigh the opportunity costs of having the money available. There was a similar argument made in the excerpts above regarding having to spend money to maintain a home.

Definition of Rational Action

Finally, another related category that was borne from the Stage Three analysis was the proposition that women might be exhibiting a different definition of *rational action* than is usually considered in economic reasoning and behavior. Specifically, in Chapter 2 of this paper, there is a discussion of economics and personal finance, and the idea that *rational* economic behavior involves maximizing one's utility, or in other words, utilizing financial knowledge to gain personal welfare through financial security.

However, the women who participated in the focus group interviews seemed to believe that maximizing one's utility might not mean saving for one's retirement or the future, or possibly did not have that option if that saving came at the expense of providing basic support for their families. The women in the focus group interviews articulated reasons why they could not save being that they would rather fulfill their responsibility as parents. For example, one respondent provided this explanation:

> "You need to use your money. And that's probably why women don't save as much as men…if my kids need something my kids are going to get what they need. But a man can simply be like, hmmm, I'm not buying that. And really don't buy it. Like I always tell people, I'm the married single. I'm married, I've been married for 25 years, but when it comes to running the house…I'm single because all my money go into it."

This response seems to imply recognition that the financial needs of a family in the present will surpass the needs of the woman in the long-term. This may not be viewed as rational behavior from an economic perspective. However, it is a conscious decision being made by women with financial knowledge who understand the consequences of their financial decision-making.

Summary of Stage Three Analysis

The key knowledge-based findings from Stage Three of the research analysis yielded the proposition that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate. A related finding in Stage Three was the concept that women's weakness in product functioning understanding could be a result of their shorter-term experience in having independent income and making independent financial choices.

The key definitional based findings from Stage Three of the research analysis is that the accepted definition of financial literacy may be incomplete as it does not include access to capital as input along with financial knowledge in the six subject areas, to yield the output of financial behavior to take care of oneself. Given women's unique set of responsibilities in society today, coupled with their lower access to capital, means that the definitional flaw may be a gender-related issue.

The Stage Three analysis also indicated that women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors. Another finding that came out of the Stage Three research analysis was the proposition that women's life priorities and necessities may require them to engage in behaviors, including not making as much income as men, that appear to not be financially literate. This dynamic could be viewed as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities with the decision made with the full understanding of the financial consequences.

Finally, the Stage Three research analysis yielded the proposition that women might be exhibiting a different definition of rational action than is usually considered in economic reasoning in that maximizing their utility might not mean saving for their retirement or the future, but using their capital to care for their family.

Conclusion

The purpose of this study is an in-depth examination of the financial topics that women need to understand given their current role and responsibilities in families and society. The original intent of the study was to utilize the accepted definition of financial literacy – knowledgeable in the areas of managing money (including saving, budgeting, investing, credit, insurance, and taxes) and utilizing that knowledge to gain personal welfare through financial literacy – to determine areas of high need financial learning areas for women. The data indicated two types of findings: knowledge-based, which was the type of information that the study expected to find, and definitional, which was a critical area that moved beyond the realm of identifying areas of knowledge weakness.

The key knowledge-based finding was that women need a better understanding of the product functioning and institutional operations aspects of personal finance in order to be financially literate, particularly in the areas of mortgages and investing. This knowledge-based finding was an area where the three stages of research all indicated that women needed more information.

The central knowledge-based category that involved the themes of a knowledge weakness in the product functioning and institutional operations areas was indicated throughout all threes stages of the research. In Stage One, the central knowledge-based category was clearly articulated through the analysis of women's financial survey results. In Stage Two, the findings were focused slightly to show that women's weakness in the product functioning and institutional operations areas was more pronounced in the areas of mortgages and investing. In Stage Three, it became clear through focus group interviews in women's financial literacy classes, that women had a sound understanding in the areas of budgeting, saving, credit, and taxes, but needed more product-functioning and institutional operations knowledge in the areas of mortgages and investing.

The study also found that while women have some financial knowledge weaknesses as discussed above, a critical issue in the analysis of women's financial literacy is the definitional constraints of financial literacy, given women's unique role in society today. The key definitional finding was that the accepted definition of financial literacy is incomplete as it does not include access to capital as one of its inputs, along with the input of financial knowledge, to yield responsible financial behavior. Because women have lower access to capital and capital is a critical input in the definition of financial literacy, some women face opportunity costs, and may also have redefined the concept of rational action when it comes to financial management. As such, even if they have financial understanding, that understanding cannot yield the behavioral output that is set forth in the accepted definition. Given women's unique place in U.S. society, the accepted definition of financial literacy may not only be incomplete, but may have significant gender-related issues.

Stage One of the research analysis began to indicate the issue of an economic barrier which may be preventing women who do have financial knowledge from being able to manifest that knowledge to take care of themselves financially. It also gave the first sense that the definition of financial literacy may be incomplete.

Stage Two echoed the findings of an economic barrier that prevents women who might have sufficient knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, including investing in risky, higher performing assets and saving for retirement. The findings of the Stage Two research analysis supported the central definitional category that evolved from Stage One, and also helped frame the economic barrier issue in terms of the opportunity costs that women face. Given women's lower access to capital, their apparently non-financially literate behavior in some cases could be viewed as the opportunity costs, or the real cost of output foregone, of women's responsibilities and priorities.

The Stage Three research analysis supported the central definitional category, as well as the economic barrier and opportunity costs concepts that evolved from Stage Two of the research analysis. Stage Three also yielded the proposition that women might be exhibiting a different definition of rational action than is usually considered in economic reasoning in that maximizing their utility might not mean saving for their retirement or the future, but using their capital to care for their family.

The next chapter will review the findings of the study, along with the original research questions, in the context of the implications for practice, policy, and future research.

CHAPTER 5

OVERVIEW OF STUDY

This study proposed an in-depth examination of the financial topics that women need to understand given their current roles and responsibilities in families and society. This research builds on previous studies that have shown that women have traditionally been identified as less financially literate than men. The definition of financial literacy as it is utilized in this study, and is accepted in the literature (e.g, Hogarth, 2002), is being knowledgeable in the areas of managing money (including saving budgeting, investing, credit, insurance, and taxes) and utilizing that knowledge to gain personal welfare through financial security.

The study worked from a series of assumptions at the outset. The primary assumption was that financial education leads to financial knowledge, which in turn leads to responsible financial behavior. Studies reviewed in Chapter 2 indicated that there is a link between knowledge and behavior; that people who are more financially literate behave more financially responsible (e.g. Hilgert et al., 2003; Lusardi & Mitchell, 2007; Calvet, Campbell, and Sodini, 2005: and Van Rooji, Lusardi, and Alessie, 2007). Additional studies reviewed (Bernheim et al, 2001 and Caskey, 2006) indicated that financial education yielded more financial knowledge. A second assumption was that one of the roots of the problem of women's lack of financial literacy today is that the *most appropriate* financial principles are not being taught. In other words, it is assumed that women will become more financially literate if they are taught the financial principles that are currently lacking in financial education. A third assumption was that girls and women have access to financial education.

Review of Research Questions

The primary research question for this study was what knowledge do American women need to be helped to make better financial decisions? A secondary set of questions elaborate on different approaches to finding that information: through the analysis of financial literacy surveys, through the analysis of women's financial behavior, and through focus group interviews with women in financial literacy classes.

The research questions that guided this study are:

What knowledge do American women need to make better financial decisions?

a. What financial topics do women struggle with most, as demonstrated through financial literacy surveys?

b. What are common financial problems for women, as demonstrated through different financial behaviors?

c. What financial knowledge do American women report they need?

This study involved three stages of data collection and analysis. The first stage was an analysis of financial literacy surveys and test results to determine an initial grouping of categories and incidents of high need learning areas for women. The second stage involved the analysis of women's financial behavior, and the constant comparison of the themes and concepts that emerge will be compared with the categories that developed in Stage One. This constant comparison further refined the category development. Stage Three of the study involved focus group interviews with a group of women who participated in financial literacy classes. The results of these interviews were analyzed for emergent themes and concepts, and were compared with the findings from Stages One and Two of the study to develop the final grouping of categories of high need financial knowledge areas for women, which ultimately formed the theories of the study.

The findings from this research yielded insight about what women might be lacking in terms of financial literacy in the areas of product functioning and institutional operations. Additionally, the research indicated that the lower level of financial experience of women might provide an explanation for that issue. Because women have less financial experience, they may know less about how financial products functions, and how financial institutions operate.

More importantly, the results of this study indicate that the accepted definition of financial literacy, which connects financial behavior to financial knowledge, might need to be focused further as it does not currently include access to capital as a necessary component of responsible financial behavior. As such, the study sheds light on a disconnect between knowledge and behavior. The findings regarding the definition of financial literacy were further supported by a series of discoveries involving why women who may have financial knowledge, but that alone may not be sufficient to be able demonstrate financial behavior because of economic barriers and opportunity costs, and a different interpretation of rational action than the classic, male-centric economic definition.

Finally, the study yielded the possibility for future work that at a minimum examines the idea that the gender-based difference in financial literacy may not be due to weaknesses in women's financial knowledge, but rather to disparities in women's access to capital. Taken together, these findings indicate that there are resource-based reasons that women lack what has traditionally been defined as the necessary knowledge and skills needed to be financially literate. However, the differential access to resources and the priorities that women may have in their lives may also be the basis for a different set of dispositions based on the values and attitudes they have cultivated for using financial knowledge and skills.

Primary Findings of the Study

Product Functioning and Institutional Operations Understanding. Women need a better understanding of how financial markets, products, and components function, as well as an understanding of how an institution operates in a financial transaction in order to be financially literate, given the accepted definition of financial literacy. The research consistently demonstrates that women have a weaker understanding of how different financial products and mechanisms function; as well as the role of the consumer and institution in transactions. This weaker understanding is demonstrated particularly in the area of mortgages and investing.

The study also found that women's weak functional and operational understanding of personal finance may be related to their lack of experience in the independent practice of personal finance. Women have only recently gained access to independent credit, and as such have less experience with financial instruments and management.

Financial Literacy Definitional Issues. The current, accepted definition of financial literacy needs to be broadened to include both financial knowledge as well as access to capital as necessary components to financial behavior to take care of oneself was another finding from this study. The study determined that, even if one has the necessary financial understanding to take care of oneself financially, that understanding is not sufficient to behave responsibly without adequate capital. As such, given women's unique position in society today with greater financial responsibility for family, in the workplace, and for themselves in different places in their lives (Heintz & Folbre, 2000; U.S. Bureau of Labor Statistics, 2008; U.S. Census Bureau, 2008) while having less access to capital (U.S. Bureau of Labor Statistics, 2008), it appears that the accepted definition of financial literacy has significant gender-related issues and may not provide a clear picture of women's financial literacy.

To begin with, women might have sufficient financial knowledge in the previously defined financial literacy areas of saving, budgeting, investing, credit, insurance, and taxes to take care of themselves financially, but may face economic barriers to engaging in those behaviors. Evidence indicates that women make less money than men, but can have equal or higher financial responsibility. As such, women may face economic barriers to all sorts of savings, and even home ownership. Therefore, it may not the case that women are choosing to act financially irresponsible; it may be that they do not have the financial means to do use their financial knowledge to gain financial success. For these reasons, it is clear that financial success is not sufficient to be an indicator of financial literacy.

Women's life priorities and necessities, including not making as much income as men, may require them to utilize their financial knowledge, in ways that appear to indicate a lack of financial literacy. While women may understand the importance of certain financial behaviors (like savings, especially as it relates to the ability to take care of themselves in the present as well as save for the future) they may have a different set of life priorities than most men – or necessities – like caring for children, that require them to engage in employment behaviors that may ultimately yield a lower salary for the same job. This finding may indicate that women have different dispositions regarding how they use the financial resources, knowledge and skills that they have acquired; even whether the resources, knowledge and skills are similar or different from the traditional male-centric patterns that have dominated American society. However, at the same time women may make the choice with the full understanding of what that behavior will yield, and they suffer the opportunity cost because of the choice they were obligated to make.

Finally, the ways in which women use financial resources, knowledge, and skills might be an indication that they are exhibiting a different set of dispositions and definition of rational action than is usually considered in male-centric economic reasoning and behavior. Some women may have determined that maximizing their utility does not mean saving for retirement or investing, or possibly did not have that option if saving or investing came at the expense of providing basic support for their families. They are making conscious decisions with financial knowledge, and an understanding of the consequences of their financial decision-making. For example, some of the women in the focus group interviews in the study indicated that they had an income level and financial responsibilities for their children that precluded them from having sufficient funds for saving for retirement, even though they recognized that saving was a good idea.

Implications for Practice

Both sets of findings, the knowledge-based and definitional, will have a positive impact on what is possible in practice. Primarily, the findings can provide direction for curriculum development in the many various types of financial education programs that exist. Financial education programs are increasing, across public high schools as well as other types of institutions like community-based organizations, financial services organizations, community colleges, and employers. As such, financial education curriculum developers can benefit from the knowledge-based findings on women's financial literacy that this study has yielded. For example, new curricula could include an emphasis on helping students learn how financial products functions, and how financial institutions operate. While this study only focused on women, it may be that different populations, including people who have only had recent access to capital and financial products, need a greater understanding in this area. Curriculum could be developed to meet that need. However, more studies focused specifically on current levels of financial understanding in these areas are needed to inform the development of such a curriculum.

Groups that provide financial education resources for women and girls in particular, such as women-focused education centers, will benefit from findings about the financial knowledge that women are lacking and an understanding of the financial strategies that are necessary given different economic profiles. For example, groups that provide information for female mortgage borrowers or regarding retirement savings for women will benefit by knowing how to approach the material to make it most useful and comprehensible to women given their unique situation. In this case, the material would incorporate an understanding of women's lower access to capital, less experience with independent financial management, and growing financial responsibility.

Additionally, educators who are developing and offering financial education curricula of all types would also benefit from an understanding of the flaw in the definition of financial literacy that was articulated in the findings of this study. This study discovered that a lack of access to capital can mask financial knowledge when financial literacy is gauged by financial behavior. Similarly, positive financial behaviors might mask a lack of knowledge. For example, previous studies indicate that men are more confident investors than women, so they tend to take more risk in their investing. However, the understanding of the need for risk in an aggressive investment program is a sophisticated level of understanding, that may not be the reason that the men are taking more risk in their investing (Rosenwald, 2008). An understanding of the approach needed to determine where financial knowledge is lacking, given the incompleteness of the financial literacy definition, will assist educators in creating programs with depth and long-term impact for both genders. For example, some men may have better access to capital and less financial knowledge, so they are in need of financial education. Similarly, some men may have more limited access to capital, and that needs to be taken into account.

The study also yields implications for practice for the financial services industry. One key area is how consumer products such as mortgages of all different structures are articulated by industry representatives to prospective clients. This communication needs to involve an understanding of the client’s outlook on risk given their life situation, and also needs to provide sufficient information without assuming that everyone understands the benefits of mortgages and investing. The conversation needs to be framed with an understanding of the perspective of clients of all different life situations, especially those without a history of access to capital, not just those who are already plugged into the financial system. Financial services companies may need to provide a different kind of communications material, and training in communications for the representatives who work with a wide variety of clients and consumer products. Financial consulting surveys show “a disturbing disregard” for the financial well-being of women compared to men (Dickinson, 1996).

Implications for Policy

Policymakers will benefit from the information and research in this study, as it can help focus funding in the area of more effective financial education. As financial education continues to grow, policymakers will need to determine how best to allocate funding for programs, and the findings from this study will help them determine areas of educational funding needs, as well as approaches, given the financial literacy definitional issues that have been articulated in this study.

Additionally, policymakers who focus on women’s economic security will also benefit from a greater understanding of the financial topics women need to understand, and the financial challenges women face, as they move toward economic security. Women in the United States are still paid less than men for the same kinds of jobs, have less access to higher-paying jobs and education, and tend to accumulate less wealth over time as they may choose to stay home to care for their children for all or part of their prime working years. Some indications of the need for an informed policy response to women’s economic security are the alarming rate of women under the poverty level, the growing rate of women-headed households, the increased rate of divorce, and the persistent discrimination in the home and workplace that continues to burden women and impede their economic security. As the government sets policy for education, it is necessary to recognize the educational needs of women in the areas of personal finance, given the economic challenges that women currently face.

Recognizing women's economic barriers and opportunity costs to entering financial areas like mortgage-based home ownership and retirement savings-based investing is a critical piece in the economic security puzzle. The assumption can no longer be made that women simply need more knowledge in order to cross the bridge to a certain level of financial behavior. It is clear from this study that given the financial system in the United States today, that women – or any group of people – who have less access to capital have less ability to participate in financial practices that allow them to take care of themselves financially.

Additionally, policy-making in the area of consumer financial services needs to be more consistent and comprehensive. Specifically, in some financial services areas, like mortgages and investing, the structures are so complicated and the communication is so convoluted that few people can actually understand the transaction and their associated risks. The financial crisis in 2008 that was brought on by the sub-prime mortgage crisis is an example of the type of extraordinary financial risk some that consumers face, and he need for improved communication between financial representative and client. For people with access to capital, an unexpected expenditure or dip in the value of an investment may not be a financial life-altering event. However, for people with less access to capital, the clear communication of financial structures and risk is critical because of the financial devastation that can be caused due to a lack of understanding. While the consumer has a responsibility to understand the transaction, the communication needs to be clear and focused given an understanding of the consumer's background, financial profile, and life situation.

Implications for Theory and Research

The findings from this study yield numerous and important implications for research in the area of financial literacy. First of all, it is critical that the definition of financial literacy be re-examined given the articulation in this study for the need to include access to capital as an important component along with financial knowledge in order to yield responsible financial behavior. The findings from this study confirm that financial literacy is composed of a combination of knowledge, skills, and dispositions that appear to be gender-related and that also appear to be related to access to varying types and levels of financial resources. Building upon this foundation, a re-examination of the link between financial knowledge and financial behavior is an important first step. This re-examination requires a review of assumptions not only that financial knowledge leads to responsible financial behavior, but as well that responsible financial behavior is always a result of financial knowledge.

This re-examination would involve studies that isolate financial knowledge from financial behavior, and also examine the role of access to capital in the realization of responsible financial behavior. It may be that this type of research and re-examination yields the idea of fewer gender-specific differences in financial knowledge, or at least a range of strengths and weaknesses for both genders. It may well determine that the gender-specific component of financial literacy is not financial knowledge, but access to capital, as U.S. women have less access to capital than men do. It may also be interesting to investigate to what extent differing access to financial resources shapes not only financial behavior, but also the dispositions, knowledge and skills needed to succeed in maximizing those resources.

As such, it may be necessary to examine the concept of financial literacy in a similar framework as Carol Gilligan's Ethics of Care (Gilligan, 1993). As the accepted definition of financial literacy is based primarily on the input of financial knowledge and not access to capital, it appears that people who are not behaving financially responsible in areas like mortgage-based home ownership or investment-based retirement savings are less financially literate. The diagram below indicates that there is currently a male-centric model that financial literacy is sufficient to achieve financial success, with the assumption that the knowledge without adequate capital can be used solely to achieve financial success. Similarly, the current thought on financial literacy also assumes that financial literacy will lead to access to capital, which in turn will lead to financial success.

Traditional Male-Centric Model of Financial Literacy

Financial Literacy ➔ Financial "Success"

↘ Access To Capital ↗

However, careful examination has shown that people who are not engaging in those behaviors may very well have adequate financial knowledge, but face economic barriers and opportunity costs to manifesting that knowledge in certain ways. Similarly, it has been shown that people who do invest in risky assets – which is considered a finanically literate behavior given the long-term risk-return yield – may not be doing so because they are financially knowledgeable. Given how different women and men's life directions, access to capital, and areas of responsibility, the same behavior might not be expected even if the same knowledge were shared.

As such, a more focused view on financial literacy is appropriate. The diagram below indicates that access to capital is necessary for contextualized financial success, and that financial literacy may not necessarily be required for financial success. At the same time, access to capital may lead to greater financial literacy, and vice versa, as the availability of capital is necessary for the use of financial products and institutions.

Female-Related Model of Financial Literacy

Access To Capital → Contextualized Financial Success

Access To Capital ↖↘ Financial Literacy ↗ Contextualized Financial Success

It would be worthwhile to do a study that included men and women with different levels of access to capital and financial responsibility, and determine different approaches of these groups. This could eventually yield a perspective on financial literacy that took the component of access to capital into account. Thus, men and women can both benefit from a re-examination of the concept of financial literacy to include a multitude of contexts and experiences, and a range of inputs. It may be the case that the findings of this study do not just apply to women, but to other undercapitalized groups as well.

Given what has been found in this study, additional research into the communication of consumer products in the financial services industry is necessary. For example, consumers have different levels of experience with certain types of financial transactions, have access to different types of financial information, and may utilize a different logic and rationale with financial behavior given their inputs. Studies that look at the financial services industry, and the way financial advice and guidance is provided, need to examine the reality of different life situations, and determine how to best provide financial information and advice based on those situations. The studies might interview subjects of different income levels to determine their access to different types of financial information, and their experience with the financial services industry, as well as what approach to financial advice and guidance they might prefer.

Studies of both genders that focus on the issues of product functioning and institutional operations are also necessary. Given the evolution of consumer products, the government taking varying positions on financial regulation, and the amount of independence in areas like retirement savings, it may be that multiple groups are struggling with financial understanding in the areas of product functioning and institutional operations. As such, studies that examine the best approach to financial education in the areas of product functioning and institutional operations for both genders need to be conducted to determine how best to educate people as financial services continue to evolve. These studies might include a combination of survey testing to determine basic levels of understanding, along with a qualitative interview approach to determine how to educate people with varying level of basic financial understanding in the areas of product functioning and institutional operations.

In the area of product functioning and institutional operations understanding, it may also be worthwhile to examine the understanding of less traditional financial institutions and structures involving products like instant tax refunds and payday loans.

Research into how these options are perceived and evaluated compared to more traditional financial institutions and structures would help articulate a relevant piece of the financial literacy puzzle. These studies might include surveys of undercapitalized groups that examine the understanding and awareness of different types of financial institutions and products, as well as the analysis that is undertaken when choosing different institutions and products, including those that are less traditional.

Conclusion

The study yielded the possibility for future work that at a minimum examines the idea that the gender-based difference in financial literacy may not be due to a weakness in women's financial knowledge, but rather to disparities in women's access to capital. The results indicate that the assumption can no longer be made that women simply need better financial knowledge in order to reach a certain level of financial behavior. It is clear from this study that given the financial system in the United States today, that women – or any group of people – who have less access to capital face economic barriers and opportunity costs to participating in financial practices that allow them to take care of themselves financially. Financial literacy may not lead directly to financial success without sufficient access to capital.

The findings from this study indicate that re-focusing the definition of financial literacy is necessary. More specifically, the findings indicate that financial literacy is composed of a combination of knowledge, skills, and dispositions that appear to be gender-related, and may also be related to access to financial resources. It is important to emphasize that financial literacy is necessary for everyone – female, male, wealthy and under-capitalized individuals – but it is not sufficient. Additionally, capital is also necessary, but not sufficient for financial success. A just society requires that all individuals – regardless of gender or background – have the opportunity to access both financial capital and literacy. This study is just one step in a larger endeavor, the next step is to further investigate the idea that fewer gender-specific differences in financial knowledge may exist, or that a range of strengths and weaknesses in financial knowledge exist for both genders.

APPENDIX 1

FINANCIAL SURVEYS AND QUESTIONS

1. *Consumer Financial Literacy Survey (2009)*
National Foundation for Credit Counselling
Questions Pertaining to money, credit, interest rates, and savings

Study Design: The 2009 Financial Literacy survey was conducted by telephone within the United States by Harris Interactive on behalf of the NFCC (National Foundation for Credit Counseling) between March 13 and March 16, 2009 among 1,000 adults ages 18+. Results were weighted for age, sex, geographic region, and race where necessary to align them with their actual proportions in the population.

Questions pertaining to money, credit, interest rates, and savings

NF1. Do you have any savings, excluding retirement savings?

NF2. Do you have…saved for each wage earner in the household?

NF3. On average, what percentage of your household's income do you save every year for retirement?

NF4. Do you currently have a home mortgage of any type?

NF5. Thinking now about your primary or main mortgage do you know if it is…?

NF6. In which of the following ways, if any, did the terms of your mortgage turn out to be different than expected?

NF7. Have you ordered a copy of your credit report in the past 12 months?

NF8. What is your credit score?

NF9. Roughly how much credit card debt, if any, does your household carry from month to month?

NF10. If you are not already doing so, could you live on a cash basis without access to credit cards for your regular monthly expenses?

NF11. Thinking now about what you have learned about personal finance, where do you think that you learned the most?

NF12. On a scale from A to F, what grade would you give yourself in terms of your knowledge about personal finance?

NF13. How strongly do you agree or disagree with the following statement? Considering what you already know about personal finance, you could still benefit from some advice and answers to everyday financial questions from a professional?

2. *University of Michigan Survey of Consumers (2001)*
In conjunction with the Federal Reserve Board
Knowledge Quiz

Study Design: In order to answer these questions, the Federal Reserve commissioned additional questions regarding a household's financial knowledge, experience, behaviors, learning experiences, and learning preferences in the monthly Surveys of Consumers. These surveys, which were initiated in the late 1940s by the Survey Research Center at the University of Michigan, measure changes in consumer attitudes and expectations with regard to consumer finance decisions. Each monthly telephone survey of 500 households includes a set of core questions covering consumer attitudes and expectations along with socioeconomic and demographic characteristics. The questionnaire was administered in November and December 2001; the data contain information from 1000 respondents.

Knowledge Quiz

Credit
True/False

FR1. Making payments late on your bills can make it more difficult to take out a loan.

FR2. The finance charge on your credit card statement is what you pay to use credit.

FR3. If you expect to carry a balance on your credit card, the APR is the most important thing to look at when comparing credit card offers.

FR4. Your credit rating is not affected by how much you charge on your credit cards.

FR5. Using extra money in a bank savings account to pay off high interest rate credit card debt is a good idea.

FR6. If you are behind on debt payments and go to a credit counseling service, they can get the federal government to apply your income tax refund to pay off your debts.

FR7. If your credit card is stolen and someone uses it before you report it missing, you are only responsible for $50, no matter how much they charge on it.

FR8. Creditors are required to tell you the APR that you will pay when you get a loan.

FR9. Your credit report includes employment data, your payment history, any inquiries made by creditors, and any public record information.

FR10. If you have any negative information on your credit report, a credit repair agency can help you remove that information.

Saving
True/False

FR11. With compound interest, you earn interest on your interest, as well as on your principal.

FR12. All investment products bought at your bank are covered by FDIC insurance.

FR13. Mutual funds pay a guaranteed rate of return.

FR14. A stock mutual fund combines the money of many investors to buy a variety of stocks .

FR15. Over the long-term, stocks have the highest rate of return on money invested.

FR16. If you buy certificates of deposit, savings bonds, or treasury bills, you can earn higher returns than on a savings account, with little or no added risk.

FR17. The earlier you start saving for retirement, the more money you will have because the effects of compounding interest increase over time.

FR18. Whole life insurance has a savings feature while term life insurance does not.

FR19. If you have a savings account at a bank, you may have to pay taxes on the interest you earn.

Mortgage
True/False

FR20. If the interest rate on an adjustable rate mortgage loan goes up, your monthly mortgage payments will also go up.

FR21. You could save thousands of dollars in interest costs by choosing a 15-year rather than a 30-year mortgage.

FR23. Repeatedly refinancing your home mortgage over a short period of time results in added fees and points that further increase your debt.

FR24. When you use your home as collateral for a loan, there is no chance of losing your home.

General
True/False

FR25. You should have an emergency fund that covers two to six months of your expenses.

FR26. Your bank will usually call to warn you if you write a check that would overdraw your account.

FR27. The cash value of a life insurance policy is the amount available if you surrender your life insurance policy while you're still alive.

3. *The Standards in Economics Survey (1999)*

National Council on Economic Education

Money, Interest Rates, and Inflation

Study Design: Louis Harris & Associates, Inc., conducted The Standards in Economics Survey on behalf of the Council for Economic Education. The survey research was funded by Merrill Lynch. This survey is based on interviews with a national cross-section of 1,010 adults aged 18 and over and a representative sample of 1,085 students in grades 9 through 12 between January 22, 1999 and February 3, 1999.

NC1. For most people, the largest portion of their personal income comes from:

NC2. If the interest rates charged by banks decreased, businesses are most likely to:

NC3. Assume that one U.S. dollar is equivalent to 10 Japanese yen. If the value of the dollar appreciates so that one dollar is equivalent to 15 Japanese yen, which of the following occurs?

NC4. The stock market is an example of an institution within our economy that exists to help people achieve their economic goals. The existence of the stock market:

NC5. Which of the following are most likely to be helped by inflation?

NC6. When the federal government's expenditures for a year are greater than its revenue for that year, the difference

NC7. The cost of borrowing money is the:

NC8. Which of the following types of investments has the greatest risk of losing value due to inflation?

NC9. Some people prefer to buy mutual funds rather than stocks in a few individual companies because generally mutual funds:

4. *Health and Retirement Study 2004*

A Longitudinal Study of Health, Retirement, and Aging Sponsored by the National Institute on Aging

The University of Michigan, Institute for Social Research, Survey Research Center

Study Design: The HRS is a national longitudinal study based on core biennial interviews of nearly 20,000 individuals representing the US population over age 50. Hispanics and African-Americans were over- sampled. Every six years, the HRS enrolls a new birth cohort in order to maintain a steady-state representation of the over 50 US population. Baseline interviews with existing birth cohorts were conducted in 1992, 1993, 1998, and 2004, with plans to enroll the next 6-year cohort in 2010. Participants are followed through the life course with biennial surveys and supplemental data collections. Data are de-identified and made publicly available at no charge to users.

Module 2: Annuities

HR1. How many years of working and paying into Social Security do you think it takes a typical worker to become entitled to his or her own retirement benefit, based on his or her own work record?

HR2. What is the youngest age that you think an eligible worker can apply for his or her own Social Security retirement benefits?

HR3. How closely do you think Social Security retirement checks adjust with the overall cost of living, after a worker retires - would you say not at all, somewhat, or fully?

HR4. What do you think that a typical 70-year old retired worker currently receives in Social Security retirement benefits, not counting spouse benefits?

Module 8: Retirement Planning

HR5. Do you think that the following statement is true or false? Buying a single company stock usually provides a safer return than a stock mutual fund.

HR6. 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: more than $102, exactly $102, less than $102?

HR7. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?

APPENDIX 2

STATISTICS OF FINANCIAL BEHAVIOR

FB1. *Income*

U.S. Census Bureau

FB2. *Savings rate*

U.S. Bureau of Economic Analysis

FB3. *Retirement savings*

U.S. Social Security Administration

Federal Reserve Board Survey of Consumer Finances

FB4. *Home ownership*

Harvard Joint Center for Housing Studies

U.S. Census Bureau

FB5. *Mortgage loan default*

Center for Responsible Lending

Mortgage Bankers Association

Federal Deposit Insurance Corporation (FDIC)

FB6. *Mortgage foreclosure*

Center for Responsible Lending

Mortgage Bankers Association

Federal Deposit Insurance Corporation (FDIC)

FB7. *Credit rating*

Experian

FB8. *Participation in the stock market or other investments*

Federal Reserve Board Survey of Consumer Finance

APPENDIX 3

PRELIMINARY DRAFT OF OVERVIEW QUESTIONS

Why are you in this financial literacy class?

When did you first start learning about personal finance?

How did you decide that you would like to learn more about personal finance?

What sorts of opportunities have you had to learn about finance? What barriers to finding financial information have you faced?

What challenges have you faced in learning financial information?

What have you learned so far about financial literacy?

What else would you like to learn?

How much of your current overall financial knowledge has come from this class?

What have you learned from it?

How much of your current overall financial knowledge has come from your family?

What have you learned from them?

How much of your current overall financial knowledge has come from your life experience?

What are some of the lessons you have learned?

What are you areas of strength in financial understanding?

What are your areas of weakness in financial understanding?

Overall, what have been the most important financial lessons learned?

Do you feel like you have enough financial knowledge to take care of yourself and your family? Why or why not?

Would you like to continue to learn more financial information?

How do you expect to continue to learn more financial information? What types of resources would be helpful?

Is there anything else you think I should know?

APPENDIX 4

FINANCIAL CONCEPT DEFINITIONS

1. *Income* – Amount of money that an individual earns in a given period.

2. *Savings* – Money that is accrued. Can accumulate when income is higher than expenses for a business or indivdual.

3. *Debt* – Money that is owed. Can accumulate when expenses are higher than income for a business or individual.

4. *Credit* – Borrowing capacity; the agreement to repay a loan over time/

5. *Interest rates* -- The cost of using the money provided by a loan, mortgage, credit card, or line of credit, usually expressed as a percentage over a period of time. Interest also refers to the income, figured as a percentage of the original loan or principal. Includes the concept of compound interest.

6. *Investing*—The use of capital to create more money. This case refers to a financial investment where an individual puts money into a income-producing vehicle. Includes the concept of risk diversification.

7. *Insurance* – A system where individuals concerned about risk and potential hazards can pay premiums to a company which will pool the income, and reimburse members in the event of a loss.

8. *Taxes* – The act of paying a fee to the government to finance government activities. Knowledge of taxes is also important because of potential tax refunds.

9. *Retirement planning* – The process of determining retirement goals and the program for budgeting and investing to achieve those goals.

10. *Financial professionals* – Individuals with expertise in the areas of money management including banking, investing, insurance, and taxes. (Investopedia.com, 2009)

REFERENCES

Allen, I., Elam, A., Langowitz, N., & Dean, M. (2008). Global Entrepreneurship Monitor: 2007 Report on Women and Entrepreneurship. The Center for Women's Leadership at Babson College.

Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The Quarterly Journal of Economics 116*(1), 261-292.

Bernheim, B. D., Garrett, D. M., and Maki, D. M. (2001). Education and saving: The long-term effects of high school financial curriculum mandates, *Journal of Public Economics, 80*(3), 435-465.

Bodie, Z. (2006). A Note on Economic Principles and Financial Literacy. Networks Financial Institute at Indiana State University. Working Paper.

Boyce, L., & Danes, S. M. (1998). Evaluation of the NEFE high school financial planning program, 1997-1998. Englewood, CO: National Endowment for Financial Education.

Braunstein, S., & Welch, C. (2002). Financial literacy: An overview of practice, research, and policy. *Federal Reserve Bulletin, 88*(11), 445-457.

Burhouse, S., Grambell, D., & Harris, A. (2004). Delivery systems for financial education in theory and practice. FDIC FYI Series on Emerging Issues in Banking. Washington, DC: FDIC. Retrieved November 14, 2008 from http://www.fdic.gov/bank/analytical/fyi/2004/092204fyi.html

Calvet, L., Campbell, J., & Sodini, P. (2005). Down or out: Assessing the welfare costs of household investment mistakes. Harvard Institute of Economic Research Discussion Research Paper No. 2107.

Caskey, J. P. (2006). Can personal financial management education promote asset accumulation by the poor? Policy Brief. Networks Financial Institute.

Center for Responsible Lending (2009). Projected Forelosures to Women by State. Foreclosure Report.

Coltrane, S. (1998). *Gender and families.* Thousand Oaks, CA: Sage Publications.

Danes, S. M. (1994). Parental perceptions of children's financial socialization. *Financial Counseling and Planning*, 5, 127-146.

Dickinson, E. (1996). The financial well-being of women and family. *The American Journal of Family Therapy, 24*(1), 65-73.

Drew, R. B. (2006). Buying for themselves: An analysis of unmarried female home buyers, Joint Center for Housing Studies, Harvard University. Working Paper.

Gilligan, C. (1982). *In a different voice*. Cambridge, Massachusetts: Harvard University Press.

Glaser, B. G. and Strauss, A. L. (1967). *The discovery of grounded theory*. Chicago: Aldine.

Glassman, C. A. (2002). Sarbanes-Oxley and the idea of "good" governance. Presentation at the American Society of Corporate Secretaries, Washington, D.C.

Heintz, J. & Folbre, N. (2000). *The ultimate field guide to the U.S. economy*. The New Press: New York.

Hilgert, M. J., & Hogarth, J. (2002). Financial Knowledge, experience and learning preferences: Preliminary results from a new survey on financial literacy. *Consumer Interest Annual*, *48*, 1-7.

Hilgert, M., Hogarth, J., & Beverly, S. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 309-322.

Hogarth, J. (2006). Financial education and economic development. Paper presented at the G8 International Conference on Improving Financial Literacy, Moscow.

Investopedia (2009). http://www.investopedia.com. Accessed July 19, 2009.

Jump$tart Coalition (2008). *2008 Survey of Personal Financial Literacy Among College Students*. Retrieved August 8, 2008 from http://www.jumpstartcoalition.com.

Lamont, O.A., & Thaler, R.H. (2003). Anomalies: The law of one price in financial markets. *Journal of Economic Perspectives, 17*(4), 191-202.

Langowitz, N., & Minniti, M. (2007). The Entrepreneurial Propensity of Women. *Entrepreneurship: Theory & Practice*, *31*(3), 342-364.

Lerman, R.I. & Bell, E. (2006). Financial literacy strategies: Where do we go from here? Networks Financial Institute at Indiana State University Policy Brief.

Lusardi, A. & Mitchell, O. S. (2006). Financial literacy and planning: Implications for retirement wellbeing. Pension Research Council Working Paper 1. The Wharton School.

Lusardi, A. & Mitchell, O. S. (2007). The importance of financial literacy: Evidence and implications for financial education programs. *Policy Brief*. The Wharton School.

Lusardi, A., & Mitchell, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education programs. Michigan Retirement Research Center Research Paper No. WP 2006-144.

Lusardi, A., & Mitchell, O. S. (2008). Planning and financial literacy: How do women fare? *American Economic Review: Papers & Proceedings 2008*, *98*(2), 413-417.

Mahdavi, M. & Lewis, J. (2005). The Smith College survey of financial knowledge and practice among college students. Survey Report.

Mandell, L. (2008). Financial literacy of high school students. In J. J. Xiao (Ed.) *Handbook of Consumer Finance Research*, (pp. 163-207). New York: Springer.

Markow, D., & Bagnaschi, K. (2004). *What American teens and adults know about economics*. A report prepared for the National Council for Economic Education. Retrieved April 28, 2005 from http://www.ncee.net.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass Inc.

National Center for Educational Statistics (2006). *State Education Reforms*. Retrieved May 19, 2009 from http://nces.ed.gov/programs/statereform/tab2_13.asp.

National Council on Economic Education (1999). The standards in economics survey.

National Council on Economic Education (2007). *Survey of the states: Economic and personal financial education in our nation's schools in 2007*. A report card. Retrieved July 25, 2007 from http://ncee.net/about/survey2007/ NCEE Survey 2007.pdf

National Foundation for Credit Counselling (2009). Consumer Financial Literacy Survey.

Organisation for Economics Co-operation and Development. (2005). Improving Financial literacy: Analysis of issues and policies. Paris, France.

Rosenwald, M. S. (2008). Why he jumps in and she tests the water: When investing, men and women respond to risk differently. *The Washington Post*, August 17, 2008.

Sarbanes-Oxley (2009). http://www.sarbanes-oxley.com. Accessed July 8, 2009.

Secor, S. (2008). Women and credit – A brief history. *Direct Lending Solutions*, http://www.directlendingsolutions.com/women_and_Credit.htm. Accessed September 20, 2008.

Strauss, A. L. & Corbin, J. (1994). *Grounded theory methodology: An overview*. In N.K. Denzin and Y. S. Lincoln (eds.), *Handbook of qualitative research*. Thousand Oaks, CA: Sage.

Strauss, A. L. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.

Swarns, R. (2009). The caucus; A White House effort to aid women and girls. *The New York Times*, May 5, 2009.

The National Council for Research on Women (2008). NCRW big five: Women, homeownership, and sub-prime mortgages—a need for fair lending practices. Fact Sheet.

University of Michigan (2001). Survey of consumers.

The University of Michigan, (2004). Institute for Social Research, Survey Research Center. Health and retirement study.

U.S. Bureau of Labor Statistics (2008). Women in the labor force: A databook (2008 edition). U.S. Departent of Labor, Report 1011.

U.S. Census Bureau (2008). Households by type . Retrieved July 2009 from http://www.census.gov/population/www/socdemo/hh-fam.html.

Van Rooij, M., Lusardi, A., & Alessie, R. (2007). Financial literacy and stock market participation. De Nederlandsche Bank Working Paper.

Vitt, L. A., Anderson, C., Kent, J., Lyter, P. M., Siegenthaler, J. R., & Ward, J. (2000). *Personal Finance and the Rush to Competence: Financial Literacy Education in the U.S.* Report commissioned, supported, and listed by the FannieMae Foundation, conducted by the Institute for Socio-Financial Studies. Retrieved November, 2008, from http://www.fanniemaefoundationorg/programs/pdf/rep_finliteracy.pdf.

Willis, L. E., (2008). Against financial literacy education. *Public Law and Legal Theory Research Paper Series, Research Paper No. #08-10.* Social Science Research Network.