Adult Preferences for the Delivery of Personal Finance Information

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The views expressed are the authors' views, and do not necessarily reflect the views of the Federal Reserve Bank of Chicago or the Board of Governors of the Federal Reserve System.

This study finds that preferences in the delivery of personal finance information vary for lower-income, less educated, and unbanked adults--traditionally underserved consumers. Adult financial education programs, therefore, are likely to be most successful if tailored to reach specific audiences. By knowing more about their constituency's preferences, financial counseling and planning professionals, educators, financial institutions and policy makers can better design and implement financial education programs to more effectively achieve their financial literacy mission.
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"For an increasingly complex financial system to function effectively, widespread dissemination of timely financial and other relevant information among educated market participants is essential if they are to make the type of informed judgments that promote their own well-being and foster the most efficient allocation of capital."

Alan Greenspan[a]

Introduction

Greater interest in financial literacy has emerged because of a heightened concern that consumers are inadequately prepared for today's financial marketplace. Financial literacy tests administered to high school seniors reveal a lack of understanding of bank accounts, credit cards, savings, investments and taxation (Mandell, 1997). National studies continue to report that a majority of high school students and adults fail to possess a sufficient understanding of basic economics (National Council on Economic Education, 1997). To help break the cycle of financial illiteracy, a number of states have integrated personal finance and economic education into their school curriculum (Lucey, 2001; ASEC, 1999; Boyce and Danes, 1998; Mandell, 1997; Stanger, 1997). In addition, many elementary and secondary schools participate in special financial education programs aimed at educating young people about financial markets.[b]

While substantial effort and resources are being expended to promote the financial education of young people, little research has been done to determine how programs can be delivered most effectively to adults who are outside of the traditional educational environment.[c] This paper offers insights about the ways in which adults prefer to receive personal finance information. Our findings suggest that the delivery method chosen varies for adults according to their socioeconomic, demographic, and life-cycle characteristics. As such, adult programs may be more effective if they are tailored to reach specific audiences. Although these findings reflect consumer preferences in the Chicago Metropolitan area, they offer useful insights to policy makers, financial counseling and planning professionals, educators, and financial institutions who have a mission to help promote adult financial literacy.

Research shows that education not only affects income (Becker, 1993), but also consumer behavior (Michael, 1975), attitudes toward savings, and decisions to save and invest (Bayer, Bernheim & Scholz, 1996; Ghez, 1975). Education changes behavior because it improves information processing efficiency and increases the returns to information. It also affects productivity by enhancing an individual's ability to evaluate new ideas and techniques and makes it possible to acquire new information in a less costly manner. Financial education, therefore, helps improve a consumer's decision-making skills and can lead to more efficient portfolio selection, risk allocation and the allocation of expenditures over time.

According to the Theory of Adult Learning, adults are self directed, motivated to learn subjects of importance to their home and work life, and take responsibility for their decisions (Knowles, 1975). This theory offers valuable insights about curriculum content and teaching methods that would be most effective within the context of specific learning environments (e.g., classroom, seminars, and web-based settings) and can be useful when thinking about how financial education can be most effectively delivered to adults. By asking adults their delivery method preferences, we learn more about what environments and delivery methods they prefer and will be most likely to benefit from.

For adults, the benefit from participating in financial education activities hinges in part on whether these programs can effectively fill the potential information gap that may exist. Bridging this gap depends on recognizing what topics are most important, identifying which concepts are least understood, and determining how this information can be delivered most effectively to adults seeking personal finance information. Our study addresses these questions in three ways. First, we measure the potential benefits that may be gained from increasing a consumer's understanding about financial concepts. Second, we examine how attributes influence the likelihood that certain delivery methods are chosen for the total sample; and finally, we analyze the delivery methods preferred by specific groups including lower-income, less educated, and unbanked consumers. Knowing more about consumer preferences in the delivery of financial information can help to direct the efforts being made to improve adult financial literacy.

The remainder of this paper is organized as follows. The next section highlights the recent trends contributing to the need for financial education and literacy. The third section describes the data used in the analysis and discusses the potential benefits to be gained by increasing a consumer's understanding about personal finance. The fourth section develops the empirical framework, while fifth section reports the findings based on the total sample and specific subgroups including lower-income, less educated, and unbanked respondents. A summary and concluding remarks are given in the final section.

Why Financial Education Is Needed

Financial literacy is being promoted for several reasons. Rising consumer debt, especially from credit card use, has generated substantial public concern that consumers are overly leveraged and particularly vulnerable to downturns in the economy. Recent studies have shown that greater credit card debt significantly contributes to higher delinquency rates (e.g., Stavins, 2000; Grieb, Hegji & Jones, 2001). By the end of 2001, the number of new bankruptcy filings reached unprecedented heights adding to public concern.[d] The increase in consumer debt, in combination with the economy's downturn, are cited by the American Bankruptcy Institute as major factors contributing to this outcome. Because of these trends, there is strong support for making credit counseling and money management programs available to consumers (American Banker, 2001). The potential benefits from participation in credit counseling programs are documented by Staten, Elliehausen and Lundquist (2002) who find that these programs have a positive influence on participants' future credit use and payment behavior.[e]

Changing trends in population demographics, participant-directed pension and savings programs, financial services technology, and federal and state public policies also contribute to the increased interest in financial literacy (Vitt et al., 2000). In terms of shifting demographics, the largest cohort group in U.S. history has entered the retirement-preparation stage, creating a greater demand for information related to investment portfolio and savings management. Similarly, as a larger number of employees become responsible for managing their own pension and savings investment portfolios, there will be a greater need or demand for a basic understanding of portfolio management. The advantage of offering seminars in the workplace are highlighted in Bayer et al. (1996)[f] and Bernheim and Garrett (2003)[g] who found that both the level of pension plan participation and contributions made to these plans increased for seminar participants, relative to non-participants.

Advancements in technology have affected both the type and the delivery of financial products and services (Gramlich, 2002). Examples include the use of credit scoring for various credit and deposit products, electronic income deposit and bill payment, and the creation of sophisticated mortgage financing and investment products. As the array of home-related lending products (i.e., home mortgage, equity, and improvement loans) have become more complex, the need for homebuyer counseling and other related programs has intensified. A study by Hirad and Zorn (2001) found first-time home mortgage borrowers who participated in pre-purchase homeownership counseling programs experienced lower mortgage delinquency rates.[h] Given the increasing complexity of financial markets, education also can help to safeguard the public against deceptive practices such as predatory mortgage lending and unsavory credit solicitations (Greenspan, 2001, 2002b).

Recurring federal benefits such as social security and federal retirement payments are increasingly being made electronically as a result of the U.S. Treasury's implementation of the Debt Collection and Improvement Act of 1996. In response to this Act, substantial efforts were made to provide low-cost deposit accounts (e.g., Electronic Transfer Accounts[i]) to recipients without a deposit account (unbanked individuals). For some recipients, this was their first experience with electronic income delivery, while for others it was their initial entry into mainstream financial markets. Beginning with the passage of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, state welfare programs were redirected toward 'welfare-to-work' and asset-building programs such as Individual Development Accounts (Schreiner et al., 2001).[j] These programs often require participants to attend basic financial management, budgeting and other personal finance-related courses. As a consequence of these federal and state policy changes, more consumers are being drawn into the financial mainstream. Their ability to make sound financial decisions will depend on how well they understand the fundamentals of personal finance. Opportunities to participate in financial education programs are likely to be an important step for these new entrants.

While it is important that all consumers have the knowledge needed to make informed financial decisions, several studies have suggested that financial illiteracy may be a particularly serious issue for certain groups. For example, Jacob, Hudson and Bush. (2000) found that financial illiteracy is a particularly serious issue for lower-income consumers. Similarly, Rhine, Toussaint-Comeau, Hogarth, and Greene (2001) report that lower-income consumers were more likely to be unbanked, holding neither a checking nor a savings account. Less educated, younger, unmarried, unemployed, minority groups and residents in low-to-moderate income neighborhoods also were more likely to be unbanked. Personal finance programs, therefore, may be an especially effective way to educate these consumers about opening and managing a deposit account. To help ensure that consumers are safeguarded from unfair, discriminatory or predatory lending practices, these programs can also educate adults about the numerous consumer protection laws and regulations.

The ability of working adults to make informed financial decisions has become increasingly difficult, even for the most financially astute consumers. Educational programs that motivate consumers toward increased asset building and wealth creation not only help them reach their financial goals but also contribute to community development (Greenspan, 2002a).

Data Description

This study uses data collected by the Metro Chicago Information Center (MCIC) in conjunction with its 2001 annual survey of households in the Chicago metropolitan area.[k] Most of the data were collected through telephone interviews. The phone numbers were selected through a random-digit-dialing sampling technique. Face-to-face surveys were also conducted to include in the sample information from households without telephones. Interviews were conducted in English and Spanish to accommodate Spanish-speaking respondents.

Definitions and means of variables used in this study are shown in Table 1. The sample size is 2,553 households. A comparison of these characteristics to those of the entire U. S. (Rhine et al., 2001) suggests that a somewhat greater proportion of Chicago metropolitan area households had higher levels of education, greater income, and were more broadly represented by minority groups than households nationwide.[l]

The Federal Reserve Bank of Chicago sponsored a supplement of questions to draw from respondents their opinions about the importance of certain financial topics as well as their understanding of these subjects. The respondents were asked about personal financial management and budgeting; checking and savings account maintenance; credit card statement and credit card terms; and loans for mortgages, home equity or home improvement.[m] Participants rated the importance of each topic as extremely important, very important, somewhat important, or not important and rated their understanding of each subject as very well, somewhat well, not too well, or not at all.

Respondents were also asked, "Given your time, and the way you like to learn, are < specific type of delivery method > an effective way for you to learn about personal finance topics?" The survey inquired about eight delivery methods in this fashion. For ease of discussion, it is helpful to think about these delivery methods as falling into one of three major groupings. The first of these groups includes formal courses held at a school in the local community and informal seminars held in the local community. Both methods represent traditional and rather structured ways of obtaining information. Often these methods have an interactive, group component to help facilitate the sharing of information and experiences,

Table 1.
Definition Of Variables

Variable	Description	Mean Proportion
Courses	Indicator variable = 1 if formal courses are chosen as a method to learn about personal finance; 0 otherwise	0.63
Seminars	Indicator variable = 1 if seminars are chosen as a method to learn about personal finance; 0 otherwise	0.55
Internet	Indicator variable = 1 if the internet is chosen as a method to learn about personal finance; 0 otherwise	0.65
Videos	Indicator variable = 1 if videos/CVDRom/DVD are chosen as a method to learn about personal finance; 0 otherwise	0.65
TV	Indicator variable = 1 if television programs are chosen as a method to learn about personal finance; 0 otherwise	0.70
Radio	Indicator variable = 1 if radio programs are chosen as a method to learn about personal finance; 0 otherwise	0.50
Pamphlets	Indicator variable = 1 if pamphlets or booklets are chosen as a method to learn about personal finance; 0 otherwise	0.73
Newspapers	Indicator variable = 1 if newspapers or magazines are chosen as a method to learn about personal finance; 0 otherwise	0.80
White	Indicator variable = 1 if respondent White; 0 otherwise	0.69
Black	Indicator variable = 1 if Black; 0 otherwise	0.16
Hispanic	Indicator variable = 1 if Hispanic; 0 otherwise	0.10
Other race	Indicator variable = 1 if Asian, Native American or other; 0 otherwise	0.05
Age 18-24	Indicator variable = 1 if respondent 18 <= age < 25; 0 otherwise	0.06
Age 25-34	Indicator variable = 1 if 25 <= age < 35; 0 otherwise	0.21
Age 35-44	Indicator variable = 1 if 35 <= age < 45; 0 otherwise	0.27
Age 45-54	Indicator variable = 1 if 45 <= age < 55; 0 otherwise	0.21
Age 55-64	Indicator variable = 1 if 55 <= age < 65; 0 otherwise	0.12
Age 65+	Indicator variable = 1 if age >= 65; 0 otherwise	0.12
Married	Indicator variable = 1 if married or married-like relationship; 0 otherwise	0.57
Single	Indicator variable = 1 if single; 0 otherwise	0.43
Home size	Number of related persons residing in the household	3.04
Male	Indicator variable = 1 if respondent male; 0 otherwise	0.41
Female	Indicator variable = 1 if female; 0 otherwise	0.59
Educ 12	Indicator variable = 1 if respondent has high school (or equivalent) or less completed; 0 otherwise	0.25
Educ 12+	Indicator variable = 1 if some college completed; 0 otherwise	0.34
Educ BA	Indicator variable = 1 if bachelor's degree or more completed; 0 otherwise	0.41
Low income	Indicator variable = 1 if household income <= $30,000; 0 otherwise	0.28
Income 30-50	Indicator variable = 1 if $30,000 < household income <= $50,000; 0 otherwise	0.26
Income 50-70	Indicator variable = 1 if $50,000 < household income <=$70,000; 0 otherwise	0.16
Income 70+	Indicator variable = 1 if household income > $70,000; 0 otherwise	0.30
LM I neigh.	Indicator variable = 1 if respondent resides in a low-to-moderate income (lmi) neighborhood (defined as areas where median family income is 80% or less than of the median family income for the Chicago MSA); 0 otherwise	0.21
Non-LMI neigh.	Indicator variable = 1 if respondent resides in a middle- or upper-income neighborhood (defined as areas where median family income is greater than 80% of the median family income for the Chicago MSA); 0 otherwise	0.79
Employed	Indicator variable = 1 if respondent employed full or part time; 0 otherwise	0.74
Unemployed	Indicator variable = 1 if unemployed; 0 otherwise	0.002
Not in labor force	Indicator variable = 1 if not in labor force; 0 otherwise	0.04
Retired	Indicator variable = 1 if retired from labor force; 0 otherwise	0.13
Own home	Indicator variable = 1 if homeowner; 0 otherwise	0.69

Rent	**Indicator variable = 1 if rent; 0 otherwise**	**0.31**
Unbanked	**Indicator variable = 1 if do not possess either a checking or a savings account; 0 otherwise**	**0.06**
Banked	**Indicator variable = 1 if have either a checking and/or a savings account; 0 otherwise**	**0.94**
Credit Card	**Indicator variable = 1 if possess a credit card; 0 otherwise**	**0.84**

Variable	Description	Mean Proportion
Budgeting Important	**Indicator variable = 1 if financial management and budgeting extremely or very important; 0 otherwise**	**0.81**
Not Understood	**Indicator variable = 1 if financial management and budgeting extremely or very important and topic not understood very well; 0 otherwise**	**0.36**
Sample size = 2553		

which may be particularly true given that the local community is the hypothetical location for these delivery methods.

The Internet and videos/CDRoms/DVDs (videos) comprise the second grouping. A dominant feature of these delivery methods is that they are more technologically advanced ways of obtaining information. Although it is possible that either of these methods may be used in a communal setting, it is more likely (especially given the way the question is posed) that a positive response reflects a respondent's preference to use technologically advanced methods for obtaining information in the solitude of his or her home.

The third group includes four types of mass media that can be used for the delivery of personal finance information. These methods are newspapers or magazines, pamphlets or booklets, television programs, or radio programs. These are traditional, independent ways to gather information.

Measures of Potential Benefits

A consumer's understanding of a financial topic conveys information about his or her potential financial education needs, whereas the relative importance given to this topic indicates its value to the consumer. When a consumer's valuation about a topic exceeds his or her understanding, opportunities exist to increase this individual's level of knowledge. The potential benefits are measured by identifying consumers who believe that a particular topic is extremely or very important and who do not know the subject very well. As shown in Table 2, 36% of the respondents said personal financial management and budgeting is extremely or very important and they do not know the topic very well. These consumers, therefore, could benefit from learning more about personal finance concepts. Among credit card holders, 22% could gain from obtaining more information about credit card statements and credit card terms. Thirty-nine percent of all households could benefit from additional information about mortgage-related lending, while 54% of the non-homeowners could gain from having more information about these financial transactions. Fifty percent of the unbanked said they did not understand checking and savings account maintenance very well although they believe this topic is extremely or very important. As such, half of unbanked could benefit from learning more about this subject. These findings suggest that adults would benefit from knowing more about personal finance topics.

Empirical Framework

We propose an empirical framework to predict and explain a consumer's likelihood of choosing a specific method for delivery of personal financial information.[n] The question asked in the survey was, "Given your time, and the way you like to learn, is < specific method of delivery type > an effective way for you to learn about personal finance topics?" Respondents were separately queried about eight delivery methods: formal courses (COURSES) held at schools in the local community, informal seminars (SEMINAR) held in the local community, the Internet (INTERNET), video/CDRom/DVD (VIDEO), television programs (TELEVISION), radio programs (RADIO), pamphlets or booklets (PAMPHLET), and newspapers or magazines (NEWSPAPER). In each of the models, the dependent variable is equal to 1 if the respondent said a particular method is an effective way to learn about personal finance topics and is equal to 0 if it is not an effective method.

Table 2.
Proportion of Respondents Who Reported Topic as Extremely or Very Important and Do Not Understand the Subject Very Well.

Topic	%
Personal Financial Management and Budgeting[1]	36
Credit Card Statement & Terms[2]	22

Loans for Mortgages, Home Equity Or Home Improvement[3]	
Total	39
Homeowner	33
Non-homeowner	54
Checking and Savings Account Maintenance[4]	
Total	18
Banked	17
Unbanked	50

1. Total sample size is 1,553.
2. Questions about credit cards were asked only to credit card holders. Sample size is 2,148.
3. Sample size for homeowners is 1,772 and for non-homeowners is 781.
4. Sample size for banked is 2,403 and for unbanked is 150.

We assume that the preference for a specific method is influenced by an individual's socioeconomic, demographic, and life-cycle characteristics. Because the survey separately asked the respondent whether or not each of these methods would be an effective delivery method, a logit binary choice modeling technique is employed using maximum likelihood to estimate the probability that a particular delivery method is chosen. Because of the question design, an individual's response took time costs and preferences directly into consideration. Implicit to the question was that these methods were costless in terms of participation or use fees.

One might expect that certain delivery methods are preferred because of perceived investment time costs. Typically, wages are used to approximate the value or opportunity cost of an individual's time. Those with lower wages, for example, might be expected to have lesser time costs than individuals with higher wages or salaries, ceteris paribus. The survey, however, did not collect information concerning the respondent's wage or salary. An attempt is made to control for the value of time by including an indicator variable equal to 1 for lower-income households (0 otherwise). Participation in courses or seminars requires a somewhat intensive and structured time commitment. As such, lower-income households might have a greater preference for participating in courses or seminars than their higher-income counterparts due to their relatively lower value of time. On the other hand, consumers who are married, employed, or have larger households may face relatively greater time constraints because of competing pressures from home and market production. If true, they may be less likely to choose courses or seminars, while being more inclined toward the Internet, videos, or possibly one of the four mass media methods.

Newspapers/magazines, pamphlets/booklets, radio programs, and television programs are traditional ways to disseminate information. These methods usually have a wide distribution network and can be designed and targeted to reach specific groups (Tam, 2002). Less educated or unbanked consumers might be expected to have a higher likelihood of seeking information from these sources, whereas they may be less inclined to choose formal courses or informal seminars because of their lack of experience with the educational or financial systems.

Seminars and courses also are traditional ways of providing information in a more structured setting. It might be expected that older consumers have a preference for these long-established learning methods, whereas younger adults may prefer newer, technology-driven delivery methods such as the Internet. It is well documented in the biological and behavioral sciences that cognitive learning processes differ by gender (e.g., Carlson, 1971; Messick, 1984; Blum, 1997; Sadler-Smith, Allinson & Hayes, 2000.) In simple terms, females are inclined to have a preference for communal or group interactions, whereas the reverse tends to be true for males. Relating these behaviors to preferences in the delivery of personal finance information, we might expect that males will be less inclined toward courses or seminars and may be more likely to choose the Internet or videos than females.

According to a report from the U.S. Department of Commerce (2000), the number of Americans with Internet access and computer ownership has been rapidly increasing. Even so, there remains a gap in Internet usage for certain groups. Specifically, lower utilization rates were observed for individuals with less income or lower educational attainment, minorities, especially Blacks and Hispanics, and older persons. Disparities in usage by gender, however, were not found in their study. Based on the Department of Commerce's findings, it might be expected that consumers with less education or lower income are less inclined to choose the Internet than their more educated or higher-income counterparts. Similarly, Blacks or Hispanics may be less likely to choose the Internet as a means of obtaining personal finance information relative to Whites.

How much a consumer values personal finance information should tell us something about the benefits he or she expects to gain from choosing certain delivery methods. In general, consumers who value this information more are expected to seek those delivery methods that offer them the greatest opportunity to reap these benefits. The importance or value from obtaining personal finance information is measured in two ways. The first is an indicator variable, BUDGETING IMPORTANT, which is equal to 1 if the consumer believes personal management and budgeting is extremely or very important, 0 otherwise. Alternatively, it can be measured by an indicator variable, NOT UNDERSTOOD, which is equal to 1 if the consumer

Table 3.
Predicted Probability of Choosing a Particular Delivery Method, Based on the Sample Means

	Predicted Probability							
	Internet	Video	Course	Seminar	Newspaper	Pamphlet	Radio	TV
Total Sample	65.1	64.5	62.7	55.2	80.5	73.1	49.4	70.3
Lower-income Respondents	53.6	60.3	64.5	58.2	79.7	69.9	56.1	75.5
Less Educated Respondents	53.3	62.5	65.0	60.0	79.9	68.2	49.9	74.2
Unbanked Respondents	50.7	66.0	73.3	67.3	76.0	67.3	55.3	77.3

believes personal management and budgeting is extremely or very important and he/she does not know the topic very well, 0 otherwise. We were not certain which of these variables would most closely depict how a strong interest in personal finance information influences the likelihood that a consumer chooses a particular delivery method. To answer this question, we include each of these measures in two separate models estimated. We found that respondents who believe that personal finance is important significantly contributes to the likelihood that each delivery method is chosen, whereas NOT UNDERSTOOD is significant only for the probability that the Internet or videos is chosen. Hence, BUDGETING IMPORTANT is specified as a control for the importance consumers bestow to personal finance information on their choice of delivery method.[o]

Findings

The predicted probabilities for each delivery method are reported in Table 3 for the total sample, lower-income, less educated, and unbanked consumers. As a delivery method for personal finance information, newspapers/magazines have the highest probability of being chosen by the total sample (80.5%), lower-income (79.7%), and less educated (79.9%) respondents. For unbanked respondents, television programs have the highest likelihood of being chosen at 77.3%. Conversely, the delivery method with the lowest probability of being chosen is radio programs by the total sample (49.4%) and less educated (49.9%) respondents; whereas the Internet is the least likely chosen by lower-income (53.6%) and unbanked (50.7%) respondents.

The influence that particular socioeconomic, demographic, and life-cycle attributes have on the likelihood of choosing a specific delivery method are determined from the marginal effects estimated from the logit models. Table 4a reports for the total sample the marginal effects estimated from the likelihood that the Internet, videos, formal courses, and informal seminars, respectively, are chosen; while Table 4b reports the comparable results from the likelihood that newspapers/magazines, pamphlets/booklets, radio programs, and television programs, respectively, are chosen. The findings for each delivery method based on the total sample are discussed below.

The Internet

As shown in Table 4a, older adults are less inclined toward the Internet as a delivery method for personal finance information. For example, the probability of selecting the Internet declines by 12 percentage points for adults between the age of 45 and 54, while for consumers 65 years of age or older the decrease is by 40 percentage points. The likelihood of choosing the Internet is also lower for consumers who are unbanked, have lower-income, or are less educated. On the other hand, employed consumers are significantly more likely to select the Internet as a means of obtaining personal finance information, supporting the proposition that time constraints and possibly flexibility of use may be important factors contributing to this delivery choice.

Consistent with gender differences in learning preferences, males are more likely than females to choose the Internet. Blacks and Other Race groups also are significantly more likely to choose the Internet than Whites. Although these minority groups show a greater preference for obtaining information through the Internet, they may be less likely to utilize this delivery method if access influences usage. It is worth noting that a recent study by Morton et al. (2001) finds that minorities and women benefit disproportionately from buying new cars via the Internet. Access to and knowledge about how to use this delivery method may be important considerations for organizations that use the Internet as a method of delivering personal finance information. This may be particularly true if their constituencies are more heavily represented by minorities, women, older adults, lower-income or less educated consumers, or the unbanked.

Table 4a.
Marginal Effects Derived from the Likelihood of Choosing the Internet, Videos, Courses, and Seminars, Total Sample

Variable	Internet	Video	Course	Seminar
Constant	0.16*	0.04	0.04	-0.12†
Age 45-54	-0.12*	0.02	0.02	0.06*
Age 55-64	-0.24*	-0.06	0.00	0.08*
Age 65+	-0.40*	-0.16*	-0.01	0.10*
Male	0.04†	0.04†	-0.03	-0.06*
Married	0.02	0.01	0.001	0.05†
Black	0.10*	0.07*	0.05	0.06†
Hispanic	-0.01	0.07†	0.19*	0.21*
Other race	0.10*	-0.04	-0.05	0.01
Low income	-0.08*	-0.04	-0.01	-0.00
Employed	0.05†	0.03	0.04	0.03
Educ 12	-0.08*	-0.01	0.05	0.05
Educ12+	-0.03	-0.00	0.08*	0.03
Home size	-0.01	0.01	0.01*	0.00
Unbanked	-0.16*	-0.01	0.05	0.07
Budgeting Important	0.08*	0.07*	0.08*	0.07*

Sample Size	2553	2553	2553	2553

* significant at the .01 level; † significant at the .05 level.

Table 4b.
Marginal Effects Derived from the Likelihood of Choosing Newspapers/Magazines, Pamphlets/ Booklets, Radio Programs and Television Programs, Total Sample

Variable	Newspaper	Pamphlet	Radio	TV
Constant	0.11*	0.13*	-0.17*	0.06
Age 45-54	0.04†	0.01	0.05	0.07*
Age 55-64	0.06*	0.01	0.09*	0.07†
Age 65+	0.09*	-0.08†	0.13*	0.03
Male	0.01	-0.03	0.01	0.03
Married	0.02	0.03	-0.02	0.01
Black	0.05†	0.10*	0.12*	0.07*
Hispanic	-0.01	0.08*	0.18*	0.10*
Other race	0.00	-0.04	0.05	0.02
Low income	0.01	-0.03	0.06†	0.04†
Employed	0.02	0.07	0.02	0.01
Educ 12	0.01	-0.04	-0.02	0.05†
Educ12+	-0.00	0.01	-0.00	0.05*
Home size	0.00	0.003	0.00	0.00
Unbanked	-0.03	-0.10†	-0.04	0.00
Budgeting Important	0.07*	0.06*	0.08*	0.06†
Sample Size	2553	2553	2553	2553

* significant at the .01 level; † significant at the .05 level.

Videos
Videos may be an especially convenient and flexible way to get personal finance information. Consistent with these potential benefits, the results in Table 4a indicate males are 4 percentage points more likely than females to choose videos, possibly reflecting gender differences in preferred learning methods. The probability of choosing videos is also higher for Blacks (7 percentage points) and Hispanics (7 percentage points), relative to Whites. Designing videos for groups with different cultures and languages, therefore, may be particularly helpful. On the other hand, older adults (65 years of age or older) are significantly less likely than their younger counterparts to choose videos to obtain personal finance information.

Formal Courses Offered in the Local Community
As shown in Table 4a, Hispanics are significantly more likely to choose formal courses, supporting the suggestion that this group may be attracted to communal learning activities. Adults with some amount of college also have a significantly greater likelihood of choosing courses than college graduates. Although small in magnitude, residing in a larger household also has a positive influence on the

preference for formal courses. This finding may reflect the greater ability of larger families to specialize in the home production process and thereby more efficiently cope with household member time constraints.

Informal Seminars Offered in the Community
Consistent with gender differences in learning preferences, males are 6 percentage points less likely than females to select seminars (Table 4a). Although it was proposed that married adults might not prefer seminars because of time constraints, we find that the reverse is true. Being married significantly increases the likelihood of choosing seminars by 5 percentage points. It is possible that joint home production and specialization between partners surmount these potential constraints. Alternatively, it may be that married respondents face more complex financial issues and seek out seminars to obtain personal finance information. Older adults (45 years of age or older), Blacks, and Hispanics also are significantly more likely to choose this traditional learning method. The positive relationship found for Hispanics and Blacks affirms the possibility that these groups may have a greater affinity toward communal learning environments than Whites.

Newspapers/Magazines
As shown in Table 4b, older adults (45 years of age or older) and Black respondents are significantly more likely to choose this method than their younger or White counterparts. Given the higher probability that this delivery method is chosen (Table 3), opportunities exist to widely distribute personal finance information through ethnic media as well as general newspapers and magazines.

Pamphlets/Booklets
Blacks and Hispanics are significantly more likely than their White counterparts to choose pamphlets/booklets (Table 4b). As a delivery method, therefore, pamphlets and booklets can be specifically designed and distributed to reach a large number of these minority groups. Conversely, unbanked consumers are significantly less likely (10 percentage points) to choose this delivery method. Older adults (65 years of age or older) also are less inclined toward this delivery method. Hence, pamphlets or booklets may not be the most effective way to provide personal finance information to unbanked or older populations.

Radio Programs
Radio programs are more likely to be chosen by older, lower-income, Black, or Hispanic consumers (Table 4b). For example, adults 65 years of age and older are 13 percentage points more likely than their younger cohorts to choose radio programs as a means of acquiring personal finance information, while lower-income adults are 5.7 percentage points more likely to choose this delivery method. Hispanic and Black consumers are 18 and 12 percentage points, respectively, more likely than Whites to choose radio programs. While historical preferences may help explain why older adults prefer this delivery method, it is likely that ease of access may influence the preferences of lower-income or minority adults.

Television Programs
Table 4b shows that lower-income, less educated, Black, Hispanic, and older (between 45 and 64 years of age) respondents are significantly more likely than their respective counterparts to choose this delivery method. Although not the most preferred delivery method (Table 3), it nonetheless may be a helpful way to provide personal finance information because it is easily accessible to a wide audience with program content that can be designed to reach these groups.

Preferences of Traditionally Underserved Groups
Whether or not certain delivery methods are most preferred by particular groups is an especially important policy question in light of the growing public concern that certain populations are underutilizing financial markets for transactions, asset building and wealth creation purposes. Lower-income, less educated, and unbanked consumers are identified as groups who are least likely to participate in mainstream financial markets. As such, financial literacy and economic education programs are expected to be especially beneficial to these consumers (Greenspan, 2002b).

An important difference in the results between the total sample and each of these groups relates to the estimated probability that a particular delivery method is chosen. Recall from Table 3 that, relative to the total sample, lower-income, less educated (high school degree or less) and unbanked respondents are less likely to choose the Internet, newspapers/magazines, or pamphlets/booklets but are more inclined toward formal courses, informal seminars, radio programs, television programs, or videos (with the exception of lower-income consumers). Inferring consumer preferences based on the total sample results, therefore, may lead to less effective delivery of financial information for lower-income, less educated, and unbanked consumers—constituencies that may be of particular importance to organizations who have a mission to promote financial education and literacy.

Policy makers, financial counseling and planning professionals, and educators frequently serve a particular constituency, while financial institutions seek to enter new or expanding markets. Knowing more about their clients' preferred way of obtaining financial information can help them design and implement effective financial education programs. The findings from Tables 5a – 5c offer insights into the delivery preferences of these groups as well as a better understanding about how certain characteristics influence these decisions for a particular group.[p] As an example, let's say that a nonprofit credit counseling organization is considering ways to bring personal finance information to its constituency, primarily lower-income families. Based on the findings reported in Table 3, lower-income consumers are most likely to choose newspapers/magazines as an effective way to learn about personal finance (probability of 79.7%). Personal finance information, therefore, can be provided by the counseling organization through articles designed and written to reflect the culture and language of its constituency in local newspapers and magazines.

If the credit counseling organization desires to closely interact with its constituency, it might consider offering formal courses at a local school because lower-income consumers are more likely to choose courses (probability of 64.5%, Table 3) then informal seminars (probability of 58.2%, Table 3). As shown in Table 5a, offering courses may be especially effective if the organization's constituency is more heavily represented by lower-income consumers who are Black, Hispanic, or less educated. Similarly, offering informal seminars may be more effective if the organization's constituency has a relatively high proportion of married, Hispanic, or employed consumers. If the credit counseling organization is attempting to reach its lower-income population who are unbanked, it may want to use delivery methods other than the Internet, pamphlets/booklets or radio programs because lower-income unbanked consumers are significantly less likely to prefer these methods (Table 5a).

As a further example, let's suppose that a bank is considering expanding its market by offering a financial education program to unbanked consumers. According to the estimated probabilities reported in Table 3, the financial institution may consider providing personal finance information using television programming or newspapers/magazines because these delivery methods have the highest probabilities of being chosen by unbanked consumers. To better establish a direct relationship with these consumers, the bank may also consider offering formal courses or possibly informal seminars in the local community. As shown in Table 5c, unbanked Hispanics have a significantly greater likelihood of choosing formal courses, while unbanked Hispanics, Blacks, or employed respondents have a greater tendency toward informal seminars. Banks that provide personal finance information from their web site specifically for unbanked consumers may not get the response sought given that this delivery method was the least preferred by unbanked consumers (probability of 50.7%, Table 3).

Summary and Concluding Remarks

From a policy perspective, knowing more about consumer preferences for the effective delivery of personal finance information can direct the efforts being made to improve financial literacy. This study finds that, relative to the total sample, lower-income, less educated, and unbanked adults have different degrees of attraction for different types of delivery methods depending on their socioeconomic, demographic, and life-cycle characteristics. Blacks, for example, have a significantly greater likelihood of choosing seven of the eight delivery methods than Whites.

To the extent that delivery preferences are positively correlated with learning, opportunities exist for consumers to benefit from obtaining personal finance information through a wide array of delivery methods. Programs designed to reach specific consumer groups may be more effective in delivering information and helping adults make sound financial decisions. From a policy perspective, these findings raise a particular important question about accessibility to or knowledge about using the Internet, especially for minorities, women and the unbanked. Increasing accessibility, therefore, may be an important if the Internet is to be an effective delivery method. By knowing more about their constituency's preferences, policy makers, financial counseling and planning professionals, educators, and financial institutions can better design and implement financial education programs and thereby achieve their financial literacy mission. Replicating this study in other geographic areas would be useful in helping to determine whether generalizations can be drawn from the consumer behavior observed in this analysis.

Table 5a.
Significant Marginal Effects: Lower-Income Respondents

Variable	Internet	Video	Course	Seminar	Newspaper	Pamphlet	Radio	TV
Age 45-54	-0.18*							
Age 55-64	-0.26*	-0.16†						0.09†
Age 65+	-0.47*	-0.21*			0.07†	-0.14†		
Married	0.09†			0.11*				
Black	0.17*		0.13*		0.13*	0.15*	19.9*	0.11*
Hispanic		0.12†	0.28*	0.27*		0.19*	27.3*	
Employed				0.10†				
Educ 12+			0.08†					
Home size		-0.011†						
Unbanked	-0.21*					-0.19*	-0.14†	
Budgeting Important	0.13*	0.13*	0.20*	0.17*		0.11†		0.09†

Sample size = 403

Table 5b.
Significant Marginal Effects: Less Educated Respondents (High School Degree or Less)

Variable	Internet	Video	Course	Seminar	Newspaper	Pamphlet	Radio	TV
Age 55-64	-0.39*							
Age 65+	-0.47*					-0.21†		
Married				0.12†				
Black		0.14†					0.15†	
Hispanic			0.17*	0.18*			0.15†	
Budgeting Important		0.12†	0.13†					

Sample size = 718

Table 5c.
Significant Marginal Effects: Unbanked Respondents

Variable	Internet	Video	Course	Seminar	Newspaper	Pamphlet	Radio	TV
Age 45 54	-0.24†			-0.25†				

Age 65+	-0.44*	-0.35†			-0.38†	-0.35†	
Black				0.24†	0.30*		
Hispanic			0.22†	0.38*			
Other race							-0.50†
Low income							
Educ 12							-0.17†
Budgeting Important			0.29†	0.28†			

Sample size = 150
* significant at the .01 level; † significant at the .05 level.

Endnotes

a. *A quote extracted from testimony given before the Committee on Banking, Housing and Urban Affairs, U.S. Senate, Greenspan, 2002(a).*

b. For example, the 'Save for America' school savings program (www.saveforamerica.org) and Junior Achievement (www.ja.org).

c. *In 1994, the Securities and Exchange Commission established the Office of Investor Education and Assistance to improve consumer education and in 1998 distributed a collection of educational materials, Financial Facts Tool Kit. The American Savings Education Council promotes savings education to our youth and adults through its nationwide partnership. In recent years, many regulatory agencies have launched financial literacy programs, including the Federal Reserve Bank of Chicago, Project Money$mart, www.chicagofed.org/consumerinformation/ projectmoneysmart.*

d. According to the American Bankruptcy Institute, 1,492,549 new bankruptcies were filed in 2001, an increase of 19% from the previous year. www.abiworld.org/stats/4q01.html.

e. *This analysis corrects for the possibility that the individuals who choose counseling do so in a non-random fashion.*

f. *The authors findings reflect both cross-sectional and longitudinal patterns in the data and are robust with respect to a variety of estimation techniques used.*

g. *Data are from a national sample drawn randomly. The authors acknowledge several potential confounding considerations that may influence their results. First, the availability of financial education in the workplace may be systematically correlated with the underlying predisposition to save. Second, the estimates may confound the effects of unobserved plan characteristics; and third, that education may affect reporting rather than behavior. Even so, the authors propose that their results favor the hypothesis that financial education significantly stimulates retirement savings among low and moderate savers.*

h. *These findings are based on estimates after controlling for possible endogeniety of borrower assignment/selection into the counseling programs.*

i. Electronic Transfer Accounts (ETAs) are special, low-cost deposit accounts set up by financial institutions participating in partnership with the U.S. Treasury to help make deposit accounts available to federal benefits recipients.

j. *IDAs are matched-contribution savings accounts available to working-poor families who are saving toward a high-return asset such as a first home, post-secondary education, or a small business. The savings incentive is provided through matching funds from private and public sources. All IDA accountholders undergo training in financial management and in their chosen asset.*

k. *Information about MCIC, a nonprofit research organization located in Chicago IL, can be found at www.mcic.org. In general, results from the total population survey can be expected to differ by no more than 1 percentage point in either direction from the results that would be obtained by interviewing all adults in the six-county Chicago metropolitan area.*

l. *More information about the national sample characteristics can be found in Kennickell et al, 1997.*

m. *As a precursor to this study, the Federal Reserve Bank of Chicago held focus groups to ascertain from economic educators, credit counselors and community leaders what finance topics would most benefit their constituencies. Participants agreed that information about personal financial management and budgeting was the greatest need for adult consumers, especially lower-income and unbanked consumers (Toussaint-Comeau and Rhine, 2002).*

n. Since the net benefit of the delivery method choice taken is not directly observable, the resulting outcome of the choice is modeled as an unobservable variable Y where*

$$Y^* = \beta' X + \varepsilon .$$

X denotes a set of attributes expected to influence the consumer's decision. ß' X is the measurable component of the net benefit and ε *is the unobserved, person-specific component. The unobserved effect,* ε*, is assumed to have zero mean and variance of* $\pi^2/3$*. The zero mean assumption is innocent if the measurable component contains a constant term. The variance will follow from our assumption of an underlying logistic model for the net benefit. Our observation of the decision (y) is such that*

$y = 1$ if $Y^* > 0$
$y = 0$ if $Y^* \leq 0$.

Hence, the probability that y equals 1 is

$$\begin{aligned} Prob\ (y = 1) &= Prob\ (Y^* > 0) \\ &= Prob\ (\beta' X + \varepsilon > 0) \\ &= Prob\ (\varepsilon > - \beta' X) . \end{aligned}$$

Assuming a symmetric distribution such as a logistic distribution then

$$Prob\ (y = 1) = Prob\ (\varepsilon < \beta' X) .$$

The underlying structural model for the probability is then given as

$$Prob\ (y = 1) = \Lambda(\beta' X)$$

where $\Lambda(\beta' X)$ *is the logistic cumulative distribution function (Greene, 2000).*

o. *The Likelihood Ratio, Lagrange multiplier or Wald test can be used to detect heteroscedasticity (Greene 2000). Our test results are available from the first author.*

p. *The index equations and marginal effects estimated for each group are available from the senior author upon request.*

References

American Banker (2001). Bankruptcy spike threatens card profit. *American Banker-Bond Buyer*, 1 (19): 1.

American Savings Education Council (1999). The 1999 youth and money survey. Employee Benefit Research Institute and Matthew Green Wald and Associates. Washington D.C.

Bayer, P.J., Bernheim, B.D. & Scholz, J.K. (1996). The effects of financial education in the workplace: Evidence from a survey of employers. Working Paper 5655, National Bureau of Economic Research.

Becker, G.S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education.* (3rd ed.) The University of Chicago Press.

Bernheim, B.D. & Garrett, D.M. (2003). The effects of financial education in the workplace: evidence from a survey of households. *Journal of Public Economics*, forthcoming.

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

Blum, D. (1997). *Sex on the brain: The biological differences between men and women*. Penguin Putnam.

Carlson, R. (1971). Sex differences in ego functioning: Exploratory studies of agency and communion. *Journal of Consulting and Clinical Psychology*, 37, 267-277.

Ghez, G. (1975). Education, the price of time, and life-cycle consumption. In *Education, Income and Human Behavior*, ed. Juster, F.T., McGraw-Hill.

Gramlich, E. (2002). Remarks by Governor Edward M. Gramlich. Financial literacy. Speech presented at the financial literacy teacher training workshop, University of Illinois at Chicago, Chicago, Illinois, May 2. [WWW document] URL: http://www.federalreserve.gov/boarddocs/ speeches.

Greene, W.H. (2000). Econometric analysis. (5th ed.) Prentice Hall. Upper Saddle River, NY.

Greenspan, A. (2002a). Remarks by Chairman Alan Greenspan. Financial literacy. Testimony of Chairman Alan Greenspan before the committee on banking, housing, and urban affairs. U.S. Senate. February 5. [WWW document] URL: http://www.federalreserve.gov/boarddocs/ testimony/2002.

Greenspan, A. (2002b). Remarks by Chairman Alan Greenspan. Economic development and financial literacy. Speech presented at the ninth annual economic development. The greenlining institute. January 10. [WWW document] URL: http://www.federalreserve.gov/ boarddocs/ speeches.

Greenspan, A. (2001.) Remarks by Chairman Alan Greenspan. The importance of education in today's economy. Speech presented at the federal reserve system community affairs research conference: Changing financial markets and community development. Washington D.C. April 6. [WWW document] URL: http://www.federalreserve.gov/ boarddocs/ speeches.

Grieb, T., Hegji, C. & Jones, S.T. (2001). Macroeconomic factors, consumer behavior, and bankcard default rates. *Journal of Economics and Finance*, 25 (3), Fall.

Hirad, A. & Zorn, P.M. (2001, May 22). A little knowledge is a good thing: Empirical evidence of the effectiveness of pre-purchase homeownership counseling. *Freddie Mac Report*..

Jacob, K., Hudson, S. & Bush, M. (2000). Tools for survival: An analysis of financial literacy programs for lower-income families. Woodstock Institute. Chicago, IL.

Kennickell, A.B., Starr-McCluer, M. & Sunden, A.E. (1997). Family finances in the U.S.: Recent evidence from the survey of consumer finances. *Federal Reserve Bulletin*, 83(1), 1-24.

Knowles, M.S. (1975). Self directed learning. Chicago: Follet.

Lucey, T. (2001). The fight against financial illiteracy. Part I in website of teacherhelp. [WWW document] URL: http://www.teacherhelp.com/article_archive/ classroom_5.html.

Mandell, L. (1997). *Personal financial survey of high school seniors*. The Jump$tart Coalition. Washington, D.C.

Messick, S. (1984). The nature of cognitive styles: Problems and promises in educational research. *Educational Psychologist*, *19*, 59-74.

Michael, R.T. (1975). Education and consumption. In Juster, F.T. (Ed.) *Education, income and human behavior*. McGraw-Hill.

Morton, F.S., Zetrelmeyer, F. & Silva-Risso, J.(2001). Consumer information and price discrimination: Does the internet affect the pricing of new cars to women and minorities? Working Paper 8668, National Bureau of Economic Research.

National Council on Economic Education. (1997). *The standards in economics survey*. Harris, L. & Associates, Inc. [WWW document] URL: http://www.ncee.net/cel/results.html.

L.W., Toussaint-Comeau, M., Hogarth, J.M. & Greene, W.H. (2001). The role of alternative financial service providers in serving LMI neighborhoods. *Conference proceedings of a federal reserve system community affairs research conference: Changing financial markets and community development*. Washington D.C. August. [WWW document] URL: http://www.chicagofed.org/cedric/2001/sessionone.cfm.

Sadler-Smith, E., Allinson, C.W. & Hayes, J. (2000). Learning preferences and cognitive style: Some implications for continuing professional development. *Management Learning*, 31(2), 239-256.

Schreiner, M, Sherraden, M., Clancy, M., Johnson, L., Curley, J., Zhan, M. et al. (2001). Asset accumulation in low-resource households: Evidence from individual development accounts. *Conference proceedings of a federal reserve system community affairs research conference: Changing financial markets and community development*. Washington D.C. August. [WWW document] URL: http://www.chicagofed.org/cedric/2001/sessionthree.cfm.

Stanger, T. (1997). Future debtors of America. *Consumer Reports*, *62*, 16-19.

Staten, M.E., Elliehausen, G. & Lundquist, E.C. (2002). The impact of credit counseling on subsequent borrower credit usage and payment behavior. Monograph #6, Credit Research Center. Georgetown University, March.

Stavins, J. (2000). Credit card borrowing, delinquency, and personal bankruptcy. *New England Economic Review*, Federal Reserve Bank of Boston, July/August.

Tam, P.W. (2002). Ethnic media muy popular in California. *Wall Street Journal*. Section B1, April 23.

Tousssaint-Comeau, M. & Rhine, S.L.W. (2001/2002). Delivery of financial literacy programs. *Journal of Consumer Education*. *19/20*, 9-17.

U.S. Department of Commerce. (2000). Falling through the net: Toward digital inclusion. A report on Americans' access to technology tools. Economics and Statistics Administration, Washington, D.C., October.

Vitt, L.A., Anderson, C., Kent, J., Lyter, D.M.,Siegenthaler J.K. & Ward, J. (2000). *Personal finance and the rush to competence: Financial literacy education in the U.S. institute for socio-financial studies*. Middleburg, Virginia.

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