FINAL REPORT

TEACHERS' BACKGROUND AND CAPACITY TO TEACH PERSONAL FINANCE: RESULTS OF A NATIONAL STUDY

Wendy L. Way, Professor and Associate Dean
School of Human Ecology
University of Wisconsin-Madison

Karen Holden, Professor
School of Human Ecology &
Robert M. La Follette School of Public Affairs
University of Wisconsin-Madison

Funding provided by the National Endowment for Financial Education

March, 2009

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I. INTRODUCTION AND PURPOSE

Public awareness of the need for financial literacy education has been growing rapidly in the United States, due to current national concern about financial behavior reflected by falling personal savings rates, uncertainty about the adequacy of retirement savings, rising debt levels and bankruptcy rates. The assumption that increasing knowledge can improve financial behavior has produced a variety of recent efforts to expand financial education at the elementary, secondary and postsecondary levels.[1] Today, for example, 80 percent of states have adopted personal finance education standards or guidelines of some kind; almost double the number of states (42%) that had such policies in 1998 (NCEE, 2007). An increasing array of educational program models, materials and other resources are also now available for use in implementing financial education recommendations and mandates (Vitt, Reichbach, Kent, & Siegenthaler, 2005).

Despite such advances, little attention has yet been devoted to understanding the characteristics and needs of the population that is pivotal to the success of personal finance education – teachers. Recognizing this gap, the National Endowment for Financial Education (NEFE) convened an invitational meeting of representatives of university programs that offered or had the potential to offer preparation for teachers of personal finance. This meeting, termed the TNT or Teaching New Teachers Meeting, was held April 9-10, 2006 at the NEFE headquarters in Denver, Colorado and resulted in identification of key concepts and an initial plan for gathering information that could inform further efforts to prepare both current and future K-12 teachers of personal finance. Following this meeting, attendees from the University of Wisconsin-Madison took the lead in developing a proposal for a national study of teachers' financial issues and capacity to teach personal finance topics. This report describes the study which was conducted, and outlines findings from that study and implications.

Study Purposes

The project approved for funding by the National Endowment for Financial Education was conducted in two phases. The first phase was a comprehensive review of the literature to identify what is known about: a) financial issues experienced by pre-service and in-service K-12 teachers and b) teachers' capacity for teaching financial education. Phase II of the project gathered information about current and future teachers' financial background and preparedness to teach personal finance education.

[1] Increasing attention is being given to other factors that may overwhelm financial knowledge as a determinant of financial behavior, such as psychological makeup, stress, and advertising (see, for example, Lois Vitt's work at the Institute for Socio-Financial Studies: http://www.isfs.org).

Technical Assistance to the Study

A national Technical Advisory Committee provided much valuable assistance with the conceptualization and execution of this study. Suggestions for membership on the Advisory Committee came from attendees at the April 2006 TNT meeting.

Individuals who served as TAC members were:

Donna Cooner, Director of Teacher Education, Colorado State University
Tim Davies, Interim Director, School of Education, Colorado State University
Catherine Huddleston-Casas, Assistant Professor, Family and Consumer Sciences University of Nebraska-Lincoln
Christine Mayfield, Instructor, College of Education, California State University, Fullerton
Ann Perkins, Assistant Professor, College of Human Development & Education, North Dakota State University
Daisy L. Stewart, Associate Director, School of Education, Virginia Tech
Patricia Swanson, Extension Family Specialist, Human Development and Family Studies, Iowa State University
Lois Vitt, Director, Institute for Socio-Financial Studies, Charlottesville, Virginia

TNT meeting attendees were:

Ted Beck, President and CEO, National Endowment for Financial Education (NEFE)
Jane Schuchardt, National Program Leader, Cooperative State Research, Education, and Extension Services (CSREES), US Department of Agriculture
Marjorie Kostelnik, Dean, College of Education and Human Sciences, University of Nebraska-Lincoln
Thomas McGowan, Chair of Teacher Education, University of Nebraska-Lincoln
Julie Johnson, Chair, Family and Consumer Sciences, University of Nebraska-Lincoln
April Mason, Dean, College of Applied Human Sciences, Colorado State University
David Whaley, Dean, School of Education, Colorado State University (now Associate Dean for Teacher Education, Iowa State University)
Virginia Clark Johnson, Dean, College of Human Development & Education, North Dakota State University
Robin Douthitt, Dean, School of Human Ecology, University of Wisconsin-Madison
Wendy Way, Associate Dean, School of Human Ecology, University of Wisconsin-Madison
Cheryl Achterberg, Dean, College of Human Sciences, Iowa State University (now Dean, College of Education and Human Ecology, Ohio State University)

Marilyn Canfield, Director of Grants Administration, NEFE
David Kaus, Controller, NEFE
Nan Mead, Director of Communications, NEFE
Brent Neiser, Director of Collaborative programs, NEFE
John Parfrey, Director High School Financial Planning Program, NEFE

This study would not have been possible without the assistance of several additional key individuals. Dr. Cheryl Fedje, University of Wisconsin-Stevens Point Professor Emerita and University of Wisconsin-Madison Family and Consumer Education Senior Lecturer, served as Senior Researcher for the project. Her assistance with the literature search, instrument design and pilot-testing, development of the sampling frames, and data collection were invaluable. Generous assistance with data collection was provided by Warren Crown, Associate Dean of Academic Affairs, Graduate School of Education, Rutgers University; Kathleen deMarrais, Associate Dean for Academic Programs, University of Georgia; and Jacqueline Edmondson, Associate Dean for Teacher Education and Undergraduate Programs, College of Education, Penn State University. University of Wisconsin-Madison graduate student, Collin O'Rourke, provided invaluable expertise and assistance during the data analysis phase of the study. We are also appreciative of the opportunity to present our preliminary results at a meeting of the NEFE Teacher Development Task Force in Denver in August of 2008. Feedback received was beneficial during further data analysis and report preparation. Final decisions regarding results reported and implications were, of course, made by the co-authors of this report.

II. LITERATURE REVIEW

Why the call for financial literacy?

Public awareness of the need for greater financial knowledge among US youth has been growing rapidly in the United States. Several developments have contributed to this phenomenon. One is that the variety of financial products, services, and providers has expanded dramatically, making the ability to discriminate among them both more challenging and essential for personal financial security (Greenspan, 2005). Michael Collins, Assistant Professor in Consumer Science, University of Wisconsin notes:

> The trend nationally is to move more of the credit risk onto individuals. People now manage their own 401(k) plans, and there are fewer restrictions on credit-card debt. For better or worse, we've democratized a lot of these financial products, and many people aren't prepared (Brian Mattmiller, 2009).

Financial knowledge may not be less among more recent US youth cohorts, rather more knowledge is required as individuals assume greater financial responsibilities and face a growing array of complex services and products. Individuals are now more vulnerable not only to unexpected financial outcomes of their own financial decisions but also to 'predatory' lending practices such as payday and car title loans, balloon payment structures, and high-cost check cashing services, typically targeting low-income or financially less-informed populations (Braunstein & Welch, 2002; O'Neill, 2006). Rising health care costs threaten coverage by employer-provided benefits prior to and during retirement. Projected shortfalls in the Social Security system certainly mean less generous coverage when now younger cohorts retire, requiring greater personal responsibility for income during retirement (O'Neill, 2006). The 2008-09 decline in the stock market shows the vulnerability of both knowledgeable and less knowledgeable individuals to nationwide and worldwide economic events. But that crisis also identified groups who were more vulnerable because they took on more risk (e.g., home mortgages) than they might have, had they had or been provided with better information.

There are several indictors that substantial numbers of Americans will not achieve financial security needed for the retirement years.[2] Household debt levels are at near record levels, the personal savings rate has been declining over time, and the numbers of personal bankruptcies remain a serious concern (Braunstein & Welch, 2002; Draut & Silva, 2004).[3] On the assumption that financial knowledge is associated with future financial capability, the scores of high school students on financial literacy tests indicate

[2] Even if the shortfall in savings adequacy has been exaggerated and most in the US in fact are acquiring sufficient savings for retirement, certain groups, particularly low earners, are consistently measured to have savings shortfalls (see Munnell, et al, 2005).

[3] The U.S. personal savings rate is expected to increase in 2008-09 a product of the definition of savings used as well as changes in individuals' purchasing behavior in reaction to the 2008-09 financial crisis (see Uccello, 2001). This is not likely to indicate increased financial security, rather the way in which national savings is defined.

that rather alarming numbers of students lack understanding of basic concepts such as investment returns, causes of debt, and relation between employment and health insurance (Jump$tart Coalition, 2006). Student surveys do indicate that important disparities exist in financial understanding across race and income and underscore the greater financial disadvantage of minority and low-income populations that are uniformly found in savings studies (Jump$tart Coalition, 2006; Lucey & Giannangelo, 2006).

The importance of financial literacy education was acknowledged in federal education policy when funding was provided under the No Child Left Behind Act (NCLB) of 2001. Title V, Part D, Subpart 13, referred to as the "Excellence in Economic Education Act of 2001," seeks specifically to improve "the quality of student understanding of personal finance and economics through effective teaching … in the Nation's classrooms." Funds are intended to strengthen relationships among businesses and organizations interested in financial literacy and economics education and to support teacher training, research and assessment activities, and the development and dissemination of instructional materials for financial and economic education (Excellence in Economic Education Act of 2001).[4]

Other federal initiatives targeted on financial education include the Financial Literacy and Education Commission, established under the 2003 Fair and Accurate Credit Transaction (FACT) Act, and the President's Advisory Council on Financial Literacy established by President George W. Bush in 2008 with oversight given to The Treasury. Title V of the FACT Act established the Financial Literacy and Education Commission with members from 20 federal agencies (Financial and Literacy and Education Commission, 2006).[5] The Commission's 2006 report described a national strategy to improve national financial literacy, one step which was to expand financial education at the elementary and secondary levels and to provide teachers the training they need to effectively teach financial education. Its main product (and national presence) is the www.MyMoney.gov web site which aims "to coordinate the presentation of educational materials from across the spectrum of federal agencies that deal with financial issues and markets." [6] In an assessment of the Commission's work, the U.S. Government Accountability Office (GAO) assessed its work as largely descriptive rather than strategic and lacking certain key characteristics that are desirable in a national strategy. The strategy provides a clear purpose, scope, and methodology and is comprehensive in identifying the breadth of issues involved and the challenges in addressing them.

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[4] This program awards a grant to a "national nonprofit education organization that has as its primary purpose the improvement of the quality of student understanding of personal finance and economics." In 2005 the National Council for Economic Education was awarded a 5-year grant "to continue its work to improve teacher education and preparation for economics instruction" (Walsted, 2007). For more information on the award see http://www.ed.gov/programs/econeducation/index.html.

[5] These include: Departments of Agriculture, Defense, Education, Health and Human Services, Housing and Urban Development, Labor, the Treasury, and Veterans Affairs; the Board of Governors of the Federal Reserve System; the Office of the Comptroller of the Currency; the Office of Thrift Supervision; the Federal Deposit Insurance Corporation; the National Credit Union Administration; the Securities and Exchange Commission; the Federal Trade Commission; the General Services Administration; the Small Business Administration; the Social Security Administration; the Commodity Futures Trading Commission; and the Office of Personnel Management

[6] See http://www.mymoney.gov/aboutus.shtml for a description of the Commission and links to personal finance material offered by other federal agencies.

However, it does not serve as a plan of action designed to achieve specific goals, and its recommendations are presented as "calls to action" that generally are either descriptions of existing initiatives or broad pronouncements that do not include a specific implementation plan (GAO, 2006).

The GAO recommended establishing a definition of financial literacy and education as well as goals, benchmarks, and actions for achieving literacy. It also recommended a review of potential agency overlap in resources and evaluating the usefulness of both the Commission's website and the hotline.

The President's Council issued its first annual report in January 2009. Among its recommendations was to "Expand and improve financial education for students from kindergarten through post-secondary education," both through mandated courses in K-12 schools and provision of curricula to teachers, parents and school administrators. Recognizing that teachers are already burdened with education mandates, the Council's recommendations emphasize developing material that could be incorporated into existing courses or study programs without extensive teacher training. There was no discussion of financial literacy training in teacher training programs themselves (Department of the Treasury, 2009**).**

The need for a more coordinated approach to financial education is apparent when reviewing the variety of state and federal initiatives that have been undertaken to strengthen and/or expand financial education (see Vitt et al. 2006 for a detailed summary of this activity). Today, the majority of states have personal finance standards or guidelines of some kind for elementary and secondary education (NCEE, 2005), with 20 mandating instruction in personal finance.[7] They vary greatly, however, in content and manner of implementation and the standards are not always coordinated with those established by professional associations or other collaborating groups and organizations such as the Jump$tart Coalition.

As states, coalitions, and federal agencies call for greater personal finance education and coordination among the institutions that offer personal finance curriculum, it is increasingly clear that little is known about what are effective financial education curricula, what measures of effectiveness indicate "successful" programs, what methods of teaching and by whom achieve better outcomes for which students, what training effective teachers should receive and how prepared are teachers to plan and implement financial education programs. There is little information on what issues teachers must face when asked to offer lessons in personal finance. Yet such information is essential if substantial progress is to be made in expanding effective financial education in K-12 schools.

Financial Literacy and Financial Education Defined

[7] Three mandate a one-semester course and 17 require personal finance instruction be incorporated into some course. The remaining states offer guidelines on personal finance instruction but do not mandate it be provided.

So, exactly what is it that teachers of financial literacy should be prepared to understand, and to teach? As might be expected, there is not just one generally accepted definition of financial literacy or of financial education. Moreover, the concepts are not always clearly distinguished from related areas of interest, such as economic education, consumer education, and even consumer advocacy or consumer protection.

One definition of financial literacy, derived from a study commissioned and supported by the Fannie Mae Foundation (Vitt et al. 2000) characterized it as:

> the ability to read, analyze, manage, and communicate about the personal financial conditions that affect material well being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy.

The Jump$tart Coalition, a national coalition of organizations and state affiliates, seeks to "encourage curriculum enrichment to ensure that basic personal financial management skills are attained during the K-12 educational experience. The Coalition identifies the following topic areas in which they define standards and set priorities for their financial education efforts:[8]

- Financial responsibility and decision making
- Income and careers
- Planning and money management
- Credit and debt
- Risk management and insurance
- Savings and investment

The concepts of financial literacy and financial education are closely related to, though often viewed as distinct, from economic education and consumer education. While financial education is usually defined as helping individuals gain the knowledge and skills to effectively manage one's personal financial resources, economic education is, according to the Council for Economic Education (CEE), the broader study of how goods and services are produced and distributed (NCEE, 2006). Recognizing the close link between economic and personal finance concepts and education, the CEE also promotes financial literacy education by providing curricula and teacher training.[9] It has also established a set of guidelines regarding knowledge needed by all high school graduates. The guidelines address topics fundamental to both economic and financial literacy such

[8] The standards for each broad area are available at http://www.jumpstart.org/guide.html. We use these broad categories in assessing K-12 teachers', education students', and school of education faculty members' felt competence to teach financial literacy topics.

[9] See its web site on personal finance education at: http://financingyourfuture.councilforeconed.org/.

as understanding how individuals respond to incentives, the role of interest rates in savings, and the role of money in determining individual well-being and exchange.[10]

Consumer education has sometimes been described as encompassing both financial and economic education. A study funded by the U.S. Department of Education Office of Consumers' Education in 1983 to identify concepts in consumer education resulted in publication of a taxonomy, *Classification of Concepts in Consumer Education* (Bannister, 1983). This document defined consumer education as "the process of gaining the knowledge and skills needed in managing consumer resources and taking actions to influence the factors which affect consumer decisions" (p. 13) and outlined three broad areas of focus: decision making, resource management, and rights and responsibilities. Decision making included study of personal and external factors affecting consumer decisions (such as the economic and political systems, needs and wants, and values and goals) and the components of the decision-making process. Resource management included financial planning (including obtaining, spending, borrowing, saving, investing, and protecting finances) as well as purchasing (e.g., shopping decisions) and conserving resources (e.g., efficient use). Citizen participation encompassed consumer protection (e.g., consumer rights, responsibilities and laws) and consumer advocacy.

How and in what areas of study financial education should fit into the public school curriculum has long been the subject of debate. Over twenty-five years ago, Wilhelms (1983) described the turf battles that had been raging between those "who thought home economics (now usually referred to as 'family and consumer sciences education' was the only good base and those with a vested interest in business education" (p. 1). The only "core" academic area mentioned as a good place for financial education was social studies, but Wilhelms also noted at that time that social studies usually entered only a "mild bid," showing little intensity of interest.[11] More recently, however, the Office of Financial Education in the U.S. Department of the Treasury (Integrating Financial Education, 2002) has been working to promote the integration of financial education into the schools via required courses in reading and mathematics and at all grade levels - elementary, middle, and high school levels. The Office has proposed revising math and reading standards to include financial education concepts and has suggested the standards be assessed as part of state educational testing programs. Social studies teachers now seem to have also staked a greater claim to the subject. Morton (2005) writing in a publication of the National Council for the Social Studies, recently argued that personal finance education was a 'homeless curriculum' that would be best situated conceptually and institutionally within economics, using the argument that such topics as labor markets and income, scarcity, choice and productive resources, supply and demand, economic institutions, and exchange and trade are consistent with personal finance education.

A review of academic program standards that have been developed for the fields of business education, family and consumer sciences education, and social studies reflect

[10] These standards are available at: http://www.councilforeconed.org/ea/standards/

[11] We find in our study that financial education is still situated primarily in social studies and vocational programs such as family and consumer education, and business education.

the historic levels of interest in the subject by these fields. The most recent business education standards (2001) address several personal finance topics under one standard titled "Economics and Personal Finance," including personal decision making, earning a living, managing finances and budgeting, saving and investing, buying goods and services, banking, using credit, and protecting against risk. The latest national standards for family and consumer sciences education include a focus on management of family economic resources, including the standard "Demonstrate management of financial resources to meet the goals of individuals and families across the lifespan" (National Standards, 1998). The curriculum standards for social studies (Expectations of Excellence, 1994) specifically identify economics as a focus for study, but do not mention personal finance.

Arguments for placing financial education conceptually within various educational disciplines continue to complicate efforts to provide definitional focus for this area of study. The conceptual complexity is not necessarily a bad thing, however. But since there is no one clear disciplinary home for financial education in public schools currently, and since all grade levels are being challenged to address financial education (Beverly & Burklatter, 2005; Greenspan, 2005; Lerman & Bell, 2006; Lucey & Giannagelo, 2006; McCormick, 2006; Suter & Meszaros, 2005; Vittt, Reichbach, Kent & Siegenthaler, 2005), teachers' subject matter preparation and teaching assignment(s) (e.g., age/grade level) will be important considerations in designing programs to enhance their capacity to provide meaningful and effective financial education.

But what does the research actually say about what makes for effective financial education programs?

Effectiveness of Financial Education Programs

Some research has attempted to ascertain the effects of financial education delivered to school-age audiences. Following is a summary of some of this inquiry focused on the question of "what works?" with special attention to evidence—which is very limited—of the influence of instructors' knowledge and training on program success.

Evaluation: Program goals. A first step in evaluating a program is to identify its intended goals. While advocates of and writers on broad financial education programs agree on the long-range goals of increasing national savings, assuring individual economic security, and increasing the chances that individuals will take advantage of educational and savings opportunities and avoid fraudulent financial schemes, it is notable how few evaluations of general financial education programs specify the particular behaviors that a curriculum aims to change, over what time period the change is expected to occur, and the degree of change over that period that would constitute program "success." This shortfall is less the case for the programs targeted to specific audiences on well-specified financial issues (e.g., ability to manage mortgage payments, employer education on benefit plan participation) which are more likely to follow a curriculum based on specific program goals and targeted to an audience with well-defined financial characteristics.

The purpose of broad financial literacy programs is variously argued as either increasing knowledge, with success judged from measured gains in knowledge and attitudes, or as changing financial behaviors that must be observed to indicate program success.[12] In either case—of programs aimed at knowledge gains or behavioral changes—the degree of change and time over which that change is to be measured are rarely defined. While these are issues that are best resolved by designers of curricula and organizers of programs, evaluators can help guide that process.

Coussens (2006) surveyed 40 financial program leaders and concluded that

> …while these programs may indeed provide real benefits, they typically may fall short of affecting consumer behavior. Program leaders implied or even stated that acquisition of knowledge itself was equivalent to improving financial literacy. One respondent stated, "Financial fitness is information, and knowledge is empowering." Another expressed that the program's benefit was "enlightened awareness." One typical respondent remarked that the goal of the program was to provide consumers with the "ability to make their own changes in their finances" (p. 320).

The conclusion is that most financial education programs—or the leaders who implement them—aim to provide *tools* that consumers may use as they wish and whenever those tools become relevant to financial decisions, but that those better decisions themselves are not the criteria for program success. This focus on knowledge rather than requiring changes in behavior is reasonable if the financial behaviors that motivate these programs are the result of a complex set of financial decisions made over time with accumulated and sequential consequences. To link that behavior to specific programs would then be difficult without following student cohorts over their financial lifetime. Indeed, Lyons and Scherpf (2004) caution that focusing on behavior, rather than knowledge alone, may motivate program leaders to encourage financial actions for which students are not yet ready.

That increasing knowledge alone may be a reasonable goal of financial literacy is argued by a National Association of State Boards of Education (NASBE) (2006) report:

> However, financial education efforts targeted at a specific type of financial decision-making (such as buying a home or saving for retirement), which have been shown to be effective, will be most successful when a person *already* possesses a basic understanding of financial concepts. Like all types of education, financial education begins with teaching the basics that will provide an individual with a foundation for analyzing increasingly complex financial problems. Introducing the youngest students to financial education basics in school helps them to develop the building blocks they will need to make good financial decision throughout their lives (p. 7).

[12] These are not inconsistent goals if there is a high positive correlation between knowledge and behavior. There need not be a positive correlation if knowledgeable individuals are more likely to make risky or poor choices because they believe in their competence to do so and if those who know less are more likely to seek and depend on the advice of professionals.

Behavioral changes by individual over time and differences in attitudes and behavior across cohorts (but not necessarily by individuals if education is started early) may be the long-run aims of financial education, but basic understanding is, according to this statement, the short run goal.[13] Translating knowledge into action must be approached with caution.

Evaluating FDIC's Money Smart program, which encourages unbanked individuals to open bank accounts, Lyons and Scherpf (2004) caution that encouraging a targeted behavior may not necessarily be consistent with better management skills. They conclude that most of the unbanked are not in a financial position to open bank accounts. While the Money Smart program may make individuals more confident and knowledgeable about steps to take when they are financially ready to do so, those who were not in a "financial position to open and maintain a healthy account, even after participating in the program…should not have been encouraged to open an account" (p. 225). Consistent with NASBE (2006) they concluded that:

> The bottom line is that the best measure of program "success" may not be the number of accounts opened, but whether the program has provided the participant with the financial skills and tools needed to make that decision on their own (p. 229).

In testimony before the Senate Committee on Banking, Housing and Urban Affairs, Brobeck (2006) argued that effective financial education requires that for consumers "there must be accessible opportunities in the marketplace for utilizing these skills" (p. 7), implying that improved skills alone may not in the short-run—and perhaps should not be expected to—lead to changes in behavior.

Few evaluations indicate what degree of change would indicate program success, that is, what *increase* in knowledge or *improvement* in financial behavior would constitute evidence for program continuation. Lerman and Bell (2006) argue that the gains may be large, but only when measured over the long-term:

> The returns to a well-designed financial education program might be quite high. If a one semester course at the high school level—or about 10 percent of a year's schooling—led to only a 0.5 percent improvement in financial well-being, the returns would rival the 6-7 percent rates of returns to earnings from a full year of schooling (p. 4).

Measuring the behavioral impact of financial education programs may be a long-term effort, akin to measuring the labor market returns to education that can only be observed by following individuals beyond graduation and through their labor market (and in this case earnings and savings) experience. Thus, we argue that identifying the most effective components and deliverers of financial education requires a careful definition of goals

[13] That is, if financial education is begun early enough no "improved" behavior would be expected to be observed for individuals. The effect of these programs would be observed across cohorts, between older cohorts who did not have access to this education and those who did as they were confronted with the same life course financial decisions.

(knowledge and/or behavioral) and specific but appropriately defined measures of success.

Measuring Financial Knowledge: Levels and Change. Financial literacy surveys have been used in two distinct ways: to measure the level of and changes over time in the financial knowledge of the general population and to measure the effects of specific financial education programs.

The Jump$tart Coalition survey of 12th grade knowledge was first administered in 1997 and every two years since 2000. Despite the increase in personal finance education programs, scores on the survey over time have varied surprisingly little, although in the latest survey (2006) only 17 percent of respondents reported having had a course in money management or personal finance (Jump$tart Coalition, 2006) and the financial score of those who had was only slightly above that for all students. The 65.6 percent of 12th grade respondents who "failed" the 2004 Jump$tart survey has been taken as evidence that nationally "many young people are unskilled in managing their personal finances" (Vitt, p. 31). Mandell (2007) concludes on the basis of the surveys and efforts to educate high school students that "we are failing as a society to make headway against widespread financial ineptitude (p. 7A)."[14]

What does a "failing" grade mean? McCormick (2005), analyzing survey responses from 10 Indiana high schools (and 207 individuals), reported that 66 percent of seniors failed the exam "using a grading scale typical of those used by schools around the nation (59% or less being a failing grade)" (p. 3). We found no explicit rationale for why the standard failing grade on other high school tests is an appropriate benchmark for this particular survey, covering a wide range of questions of varying financial sophistication. That most Indiana students responding to this survey had had an economics class or one that offered a stock market simulation experience, that only 15 percent of respondents did not work, and that half of seniors reported being confident in their ability to manage their money may imply the inability of the survey to identify money management skills and knowledge.

Lucey (2005) suggests that tests of financial literacy, especially measuring literacy over time, may be seriously flawed. Comparing the Jump$tart Coalition 1997 and 2000 survey for reliability (consistency) and validity (i.e., the ability of the survey to measure intended concepts), he concludes that the items on the surveys did not cover the benchmarks set by Jump$tart. He also presents statistical evidence of cultural and educational biases in questions; that is, that certain groups were more familiar with certain concepts which need not relate to actual practice differentials.

O'Neill and Xiao (2006) used a "Financial Fitness Quiz" to assess the prevalence of specific practices among (self-selected) respondents to an on-line survey. The 20 questions focused primarily on practice (e.g., balancing check book) and knowledge of own financial characteristics (e.g., know income tax bracket). While the mean score was

[14] National survey data presented as evidence of failed educational programs are problematic given the variation across the nation in the types of programs delivered and uncertainty in the number reached.

approximately 66, the practices with the highest scores were those that one could argue were most likely to be associated with financial solvency. These are having a checking account to pay bills, having insurance to cover large expenses, comparison shopping, and keeping organized financial records. Those practices least often followed are behaviors that while recommended would not necessarily indicate financial vulnerability. Not having a written will could mean assets are being transferred largely through beneficiary designations, not having written financial goals does not mean no goals are in mind, and not calculating net worth annually need not mean an individual does not read financial statements reporting wealth and is not aware of the interaction among these reports and other assets and liabilities.[15] While one could argue that individuals should know their income tax bracket, there is no evidence that individuals who know (or remember) their tax bracket experience better financial outcomes. Chen and Volpe (1998) argue that students are most likely to correctly answer questions about financial issues with which they are most familiar (e.g. auto insurance and apartment rent). The implication is that understanding whether individuals have poor knowledge for the financial situations they face now or are likely to in the near future requires linking information to individuals' "need to know." Few studies of financial literacy do this.

Lerman and Bell (2006), describing the results of the 2004 Jump$tart Coalition Survey, quote specific questions rather than total scores as indicating poor financial knowledge.[16] Total scores are not good indicators if curriculum and survey test questions are misleading or poorly stated. Lerman and Bell describe such misleading or erroneously stated components in the Jump$tart curriculum and survey. This is a problem that is present across school curricula and financial surveys. For example in one financial quiz (Schug, Wynn and Posnanski, 2002), one true/false test question is:

> At age 18, you decide not to smoke and save $1.50 a day. You invest this $1.50 a day at 8 percent annual interest until you are 67. At age 67 your savings from not smoking are *almost* $300,000 (emphasis added).

A calculation using annual interest compounding, implied by the stated annual interest rate, and beginning of period calculations, implied by the way age is phrased, would yield just over $290,000 in savings. The statement is true and program materials indicate that this "correct" response is intended to illustrate that "because of the power of compound interest, small savings can make a difference. It pays to resist temptation and live below your means." However, a more knowledgeable student understanding that "almost" implies less than and understanding that interest more typically is compounded monthly would calculate a value of just over $329,000; a student who considered that the savings is daily and bank accounts are often daily compounded would calculate a value of

[15] Surveys typically ask about individuals' financial behavior. Yet some may live in households where financial tasks are allocated among individuals with another, for example, maintaining the household budget—or another family member building up credit card debt. Few surveys ask about household financial practices.

[16] That 2/3rds did not know that money loses its value with inflation is indeed worrisome and probably more informative than a summary score totaled over many questions. Likewise individuals reporting feeling not well informed about managing household finances is both an indicator of knowledge as well as perhaps an indicator of motivation to learn.

$338,000. These students who would do these calculations and answer FALSE would in fact be more financially knowledgeable. Regardless, a student with little financial knowledge could guess with a 50 percent probability of giving the "correct" answer.

Financial Literacy: The Educators. What has been quite surprising to us is that few evaluations consider who teaches the programs, the training of the educators, or how evaluations can be structured so that their results can be used to improve the training and effectiveness of educators. Fox, Bartholomae and Lee (2005) describe the diversity across financial education as varying "by the setting, audience, and subject matter." While the authors mention problems faced when all modes of education are lumped together—i.e., being unable to distinguish seminars, consultations, or printed material as the best delivery system—there is no indication that who teaches financial education and their own preparation may be important components in outcomes.

In a review of financial education programs, Vitt et al. (2000) found but one program that could be described as including a component for training in financial education skills. This exception is the Centers for Economic Education which has been supported by the Council for Economic Education (CEE) to serve as primary resource for teachers and has developed curricula for teacher training programs. While other groups, including the National Endowment for Financial Education with their *High School Financial Planning Program*, may attach teacher instruction manuals to specific curriculum, they generally do not offer broader training in methods of effective instruction that are not tied to the delivery of a specific program. In addition, most program descriptions either are silent on who is best able to deliver program materials or expect program delivery by non-educator financial experts. For example the American Bankers Association curriculum is expected to be delivered by banker volunteers from banking groups, implicitly assuming that financial expertise is sufficient to be a good educator.[17]

Some studies explore from whom teens obtain their knowledge of personal finance, though there are no studies we have found of the relative roles these actors play in imparting *effective* knowledge. Studies have explored students' preferences for financial educators (Varcoe et al., 2001). Lyons (2003) found that financially at-risk students preferred financial information from online resources over seminars, workshops or counseling services. In other studies students express preference for one-to-one counseling (Lyons and Hunt, 2003). Whether these preferences reflect more effective modes or providers of education than others has not been explicitly examined.

Hilgert, Hogarth and Beverly (2003) conclude that learning from friends, family and experience leads to positive improvements in behavior. The 2004 Jump$tart Coalition surveys document the greater importance of parents than schools in learning money management skills and that parental education levels and students' college aspirations were positively correlated with survey question scores. Varcoe et al. (2005) discuss the importance of teachers' choices in financial education outcomes; their choice to teach a financial curriculum, of the units to be taught, and of the type of educational approach

[17] The "Money Watch" curriculum, offered to Black colleges and universities by the Society for Financial Education and Professional Development is intended to be taught by CFP, CPA and RIA professionals.

(e.g., interactive). However their study does not attempt to measure the effect of variation among teachers in material taught and teaching methods.

Shug, Wynn and Posnanski (2002) describe a Milwaukee high school curriculum, the Stock Market Simulation that focuses, as its name implies, on stock market investment. The interesting feature of this program is that it may speak as much to teacher's financial interests—savings and reasons for saving some share of their income—as to students'. The program included a component of teachers' training with teachers first being instructed on personal finance basics with the Center for Economic Education of the University of Wisconsin Milwaukee assisting teachers in developing material. Pre- and post-training test scores were compared, and the simple t-test of means showed gains. However, the analysis compares group averages and does not explicitly measure and discuss changes in scores for individual teachers.

Lyons et al. (2006) conducted one of the most extensive examinations of financial education and program evaluation. In the study's first phase, the authors attempted to understand constraints on and obstacles to instructors evaluating outcomes of programs they teach. The emphasis was on evaluating program outcomes—how to assess what participants learned and the impact of knowledge on behavior—with no mention of the value of evaluations to instructors individually and to the programs as a whole.[18] Lyons et al. discuss the difficulties instructors faced in following through with program assessment, of dealing with a diverse audience and, with scarce time and resources, in motivating "*participants* to complete program evaluations" (emphasis added). Participants in focus groups organized by the authors proposed that outcome evaluations be standardized across programs and argued that increased funding for evaluations would increase the capacity of instructors to evaluate *outcomes* as well as provide incentives for participants to cooperate in the evaluations. The sense among interviewed educators that evaluations were "dumped" on them or were an afterthought suggests that evaluations are neither designed for nor described to instructors as providing useful information for improving program delivery.

The second phase of the Lyons et al. study was a national survey of instructors. Striking is the diversity of instructor by type of organization in the academic or nonacademic sector, years of experience, financial topics taught, primary target audience, and methods of delivery. Though the effect on program outcomes is not mentioned, a major source of diversity in financial education programs is that of instructors. Failure to consider instructor diversity may have contributed to the authors' focus on outcomes evaluation while neglecting the value of evaluations to improving instructors' teaching efficacy.

Baron-Donovan, Wiener, Gross and Block-Lieb (2005) examine teacher training provided to a diverse set of professionals being prepared to counsel debtors as required under the US Bankruptcy Code. The motivation for this course was the US Bankruptcy Code that requires an individual complete a financial literacy course before a bankruptcy

[18] This reflects the tendency of even small scale program evaluations to focus on outcomes rather than other legitimate purposes for evaluation, particularly evaluation as a tool for organizational learning (Weiss, 1998).

is discharged. While education is mandated, and the provider of this education must employ certified individuals, not all instructors are required to have any form of certification. This evaluation was to discover if training can be delivered effectively to a group of teachers from diverse background (e.g., lawyers, accountants, credit counselors, social workers and bankers).

Interestingly the focus of the training was not solely on financial concepts and facts but included information on the psychology of money and debt as well as on financial concepts and adult pedagogy. The curriculum was designed to educate debtors on the "psychological underpinnings of spending decisions," to help them develop spending and savings plans, to teach them about the proper use (and misuse) of credit, and to provide the vocabulary to make "more thoughtful financial decisions." The evaluation examined use and satisfaction with these separate aspects of the training, conducted pre and post knowledge tests of the teachers, and conducted classroom assessment of teachers' teaching methods. Several aspects of this study should be noted. First, is the program's emphasis in both training and lessons to be provided to debtors on the psychological aspects of money and credit. That is, wise financial decisions are not assumed to come from knowledge alone. Second is that the pretest-posttest of teacher knowledge asked sixteen closed-ended questions, each of which required some financial calculation, testing comprehension of key financial concepts and use of those concepts in financial decision making.

The authors conclude that counseling or training programs should not assume that credentialed teachers (e.g., those with a CPA or CFP designation) necessarily make good teachers. Knowledge itself is not sufficient to provide effective education. But there was little discussion of the effects of teacher background and training on program outcomes. Use of teaching material by teachers was observed for a sample of trained teachers, and there was great variation in its use, including in number of units covered and full use of all material in covered units. They conclude that:

> ..teachers were well trained to provide financial literacy classes and that they do not need prior experience with bankruptcy or financial education to qualify for this type of training program. Therefore, our results suggest that PFM instructors may not need to be CPAs, accredited financial counselors, certified financial planners, or even State certified teachers to teach effectively the principles of personal financial managements. Instead, our results show that teachers can come from many different backgrounds and that they can, *with training*, become quality financial literacy instructors. (p.72)
>
> We are skeptical about the wisdom of assuming that experienced teachers, certified public accountants or financial planners are able to teach financial literacy courses without additional training because few of the proposed certifications likely enable "mock" teaching or a practice teaching session, that is then observed and critiqued. Therefore it is possible that the minimum statutory qualifications are insufficient unless supplemented with adequate training (p. 73).

While arguing that individuals who are specifically trained to deliver the identified financial education are able teachers, this study does not identify the particular aspects of the training, teaching, or prior backgrounds that lead to more or less successful training outcomes for the students they teach. Indeed very little in the literature on financial literacy program outcomes identify the role of teachers and their training in observed gains.

Evaluation of General Financial Literacy Programs. It is not difficult to discern from the financial literacy literature that a large number of financial education programs are currently available. To assess what is known from evaluations of these programs we looked at some of the most widely known general financial literacy programs. These include:[19]

- Jump$tart, a curriculum offered to K-12 grades by the Jump$tart Coalition for Personal Financial Literacy.
- Money Smart, a curriculum for adults, sponsored by the FDIC.
- Money 2000, a Cooperative Extension Service program (USDA)
- America Saves initiative, a nationwide campaign with partners USDA and the Consumer Federation of America.
- Cooperative Extension System (CES)'s Financial Security Initiatives
    - Financial Security in Later Life Program
    - Small Steps to Health and Wealth program
- NEFE High School Financial Planning Program

Several authors have reviewed evaluations of these and other general financial literacy programs and, consistent with instructor response in Lyons et al. (2006), have found evaluations to be variously constructed and to provide inconsistent results of program effects. The designs adopted are those considered least likely to provide valid results with little attention given to validity threats.

One-Group, One-Period Designs. The most prevalent form of evaluation is the gathering of information at one point in time, asking about satisfaction with program and self-reported increases in knowledge at the end of a program (Vitt et al, 2000).[20] The evaluation literature assesses this approach as providing unreliable indicators of program impact because of the likelihood that individuals will respond based on criteria other than that of intended program goals or because they have an interest in the program's or instructor's future (Weiss, 1998). Although this approach may provide valuable

[19] Vitt (2000) reviews the wide variety of formal financial education programs.
[20] Probably even more frequent are measures of program "product" that count numbers of sessions and participants, requests for training, and reported awareness of issues (see Vitt (2000) p. 113).

information on interest in course content, the consensus of the evaluation field is that it does not provide valid evidence on intended program outcomes.

Cross-sectional data of individuals who have and have not taken financial literacy courses can suggest the influence of general financial education on knowledge but not the effect of specific programs (or instructors and methods). Avard, Menton, and English (2005) found that having a high school course in economics or finance had little impact on the ability of college freshmen to accurately answer questions on a financial survey. While Murphy (2005) and Chen and Volpe (1998) found that among college students, business majors answered more questions correctly, this could be due to selection into business of more knowledgeable students.

Rachlis and Lyons (2006) conducted a telephone survey of a random sample of the U.S. population and asked about knowledge of credit reports, how to obtain them and knowledge of credit score meaning and means of correcting reports. Greater educational attainment was associated with greater knowledge, but living in a state where free credit reports were available reduced that association. Having a mortgage or an automobile loan, both occasions when credit reports would have been obtained by lenders and interpreted for the borrower, increased knowledge. Quantile regression (with groups divided by knowledge scores) indicated that education had a larger effect at lower levels of credit report knowledge. While this study is fairly unique in its representative population sample, it is a single cross-section study which cannot distinguish whether education leads to greater credit knowledge or both are due to a common causal factor that leads individuals to seek greater knowledge in general. That the latter may be the case is suggested by Bowen (2002) who examines parents' and teens' financial knowledge and finds a surprisingly low correlation, which is attributed to the absence among young teens of "teachable (from parents) moments."

An interesting use of a one-period design to measure financial education effects is that of Bernheim, Garrett, and Maki (1997). A nationally representative telephone survey (in 1995) of individuals 30-49 was conducted to measure the effects of living in states with state mandated financial education in high school. They examined the savings behavior of individuals who graduated from high school five years after a state mandate was instituted with those who graduated from high school in a state with no mandate or a later instituted mandate. Living in a state with a mandate while in high school was associated with increased asset accumulation in adulthood, indicating the broad effect of state financial education mandates. Note that the key independent variable was a high school mandate, not whether individuals in fact had enrolled in particular financial education courses; this was to control for the selection bias that results when individuals who select into an educational program are compared with those who do not. Thus their results are across all potentially influenced individuals not just those who select into these programs and may capture both the direct and indirect influence of financial education on students' later financial behavior. Our own investigation of the variation in mandates (e.g., some specify curriculum and others do not) and their implementation (e.g., some have stronger enforcement mechanisms) confirms the wide variation in exposure by individuals across states. Individuals in states that had no mandate when they were in high school may have been equally exposed and individuals living in states with financial mandates may not

have been so. Yet the average difference in financial knowledge and savings behavior may have been due to other factors associated with mandates, particularly the effects of financial mandates on teacher training, their ability to introduce financial components more broadly into the curriculum, and to teach it more effectively.[21] This would be likely if indeed, as indicated by respondents to the 2001 Survey of Consumers, it was the case that the most effective sources of financial education, in terms of increasing financial knowledge, are those that are available "on demand," rather than according to some other schedule (Hogarth, Hilgert, and Schuchardt, 2002). It may be where teachers are expected to teach personal finance topics, they are more likely to have the knowledge and "confidence to integrate personal finance concepts into their K-12 classrooms" (Vitt et al. 2000, p. 66).

One-Group Two-Period Designs. A somewhat stronger design is the pretest-posttest comparison. While this is the broadly used in evaluations of K-12 programs, the absence of a control group means that a causal conclusion cannot be drawn about the independent role of the program and the measured change in knowledge. Evaluators cannot answer the objection that maturation effects would not have caused the observed change, or that when given identical tests to measure knowledge gains between time 1 and time 2 participants are likely to learn how to interpret questions (i.e., they may have misunderstood questions on the first test), how to answer specific questions correctly (i.e., if they knew their first answer was wrong, they answer it correctly the second time), or what is the expected behavioral outcomes (i.e., intention rather than actual behavior drives their responses). While this design can provide useful feedback on program design and content, it cannot identify the program as the only different condition between time 1 and time 2. A consistent finding in the financial education literature is that financial literacy increases with age and with years of education, even when controlling for other factors (Chen and Volpe, 2002; Murphy, 2005). The potential that maturation may play a role is more likely when changes are small and programs have not established benchmarks for change.[22] Lyons and Scherpf (2004) also point out that if drop outs from a program are those who are less skilled or interested in money management, overall scores may increase without a change for those who remain in the program. Results from a study by Varcoe, Martin, Devitto, and Go (2005) caution that self-selection of teachers choosing to teach a financial curriculum may also positively bias observed results.

Evaluations of programs using a simple pretest-posttest design include Shug, Wynn and Posnanski (2002) who evaluated a Milwaukee High School program focusing on measured knowledge, and Boyce and Danes (2004) who evaluated the NEFE High

[21] The authors quite effectively control for the possibility that states that introduce mandates originally had a more knowledgeable population. In states without mandates it may be that financial education occurs when individuals demand it and teachers want to teach it. The purpose of mandates is to eliminate this selection effect although more motivated students will still be more likely to absorb and act on the knowledge.

[22] For example, Boyce and Danes (2004) report that while 9 percent set goals for managing money before the program, this grew to 15 percent after and to 24 percent three months later. This increase could be due to the program, or to greater understanding of the term and its application to what they were already doing, to finding jobs and developing those skills. Whether this increase is "large" or "small" is also not established in the program literature.

School Financial Planning Program, Bowen and Jones (2006) who evaluated Pennsylvania State University's Commonwealth Credit Program.

An interesting one-group, two-period design is the retrospective pretest used by Danes, Huddleston-Casas and Boyce (1999). This design is based on the argument that a comparison of pre-test responses with post-test results leads to positively biased outcomes because participants know too little to answer questions even about knowledge they initially have (termed a "response shift bias"). The NEFE High School Financial Planning Program (HSFPP) they evaluated was shown to increase knowledge, self-efficacy and desired financial behavior by students. The sample of teachers consisted of those who requested the curriculum; there was virtually no information on the characteristics of the teachers themselves. While teachers reported satisfaction with the curriculum, the authors note that not all teachers used all of the lessons; no information was provided on how much of the curriculum was used nor is there a report on why some teachers did not use each of the curriculum components or the influence of partial or full curriculum use on results.

Two Nonrandom Comparison Groups. Few financial literacy evaluations compare program groups to non-program groups. Staten (2006) is the rare example, using a comparison group to examine whether credit counseling provided by a credit bureau leads to improved credit profiles over the following three years. Clients from a credit bureau were compared with data on individuals with similar risk profiles who did not seek counseling. Because this comparison is subject to selection effects—the seeking of credit counseling by more motivated individuals—the author statistically corrects for selection bias and finds that much of the improvement that was measured for the counseled group could be attributed to motivational differences; that is, the greater motivation of the counseled group to improve their credit and seek counseling to do so. The author notes that across some measures there were changes that could be attributed to credit counseling itself—total debt, total active accounts—but that one cannot entirely discount the influence of counseling strategies on these behavioral variables. The much smaller effect of programs evaluated with comparison groups versus pre and post-comparisons is a frequent finding in the program evaluation literature.

The selection effect in financial literacy programs deserves some discussion. If the reason for a financial literacy program is to provide financial education and increase financial awareness to a degree that would not have otherwise been obtained without that particular program, then evaluators must consider selection and maturation effects. Individuals could have gained that knowledge elsewhere, in other programs or by tapping on-line or printed information. On the other hand, if the purpose of the program is to effectively deliver information to those who need, seek, or ask for it, the issue most appropriate to address is the program's effectiveness relative to other ways of obtaining financial information by motivated individuals. The appropriate comparison group is a similarly motivated group, but one in another or no program.

Few rigorous evaluations of general financial education programs have been done, and so our knowledge of "what works" and why is sparse. However, there is a literature that is quite consistent in showing that individuals who voluntarily seek financial information or

are required to do so by a specific financial event (a loan application, bankruptcy) are more likely to gain in financial knowledge and improve financial habits (Braunstein and Welch, 2002). This observation has given rise to the speculation that financial education linked to a meaningful "moment of opportunity" leads to the most effective educational efforts. These "moments of opportunity" are a signal of selection into financial education by those most motivated to learn. Whether they would have discovered the same information to the same effect even without the financial counseling program remains an open question. Nevertheless, the smaller measured effect of general financial education, particularly at the high school level, may signal that motivation to seek financial information is an important component of financial education—that selection effects matter to some degree.[23] It may be that the Bernheim, Garrett and Maki (2001) results arise because in states with curriculum mandates, those motivated to learn are most able to obtain that information and in a more timely manner. The importance of timing in financial education is suggested by the results of financial education programs at the middle school level which suggest relatively rapid learning of financial concepts and large gains in financial knowledge (Mandell, 2007). Longer term and more rigorous evaluation studies would be necessary to know whether gains from financial education in middle school persists into later grades, aiding in the acquisition of additional knowledge and gains in financial status rather than being simply a timing effect—i.e., earlier learning that does not improve subsequent behavior.

Models of Financial Education

Evaluation of financial education suffers because there is no generally accepted behavioral model of how financial education, knowledge and behavior are linked. Vitt et al. (2005) argue that:

> Without a better understanding of how consumers make decisions—and what sparks their desire—efforts that try to help them navigate rapid societal changes are often ineffective. Without a better grounding in the principles of social change, however, it is difficult to identify—and help consumers themselves identify—the sparks that drive their consumption choices and their decisions to save (p. 111).

A recent innovation in the financial planning literature may signal greater attention by evaluators to understanding the underlying behavioral relationship between knowledge and improved financial management. The Transtheoretical Model of Behavioral Change (TTM) is "a theoretical model of behavior change, which has been the basis for developing effective interventions to promote health behavior change."[24] The model has

[23] Two groups may be valid comparison groups even if non-randomly assigned as long as the assignment criteria have no relationship to the measured program or its outcome. K-12 students may be more likely to serve as valid comparison groups if assignment to a classroom has no relationship to financial knowledge or behavior.

[24] An informative discussion of TTM is found at: http://www.uri.edu/research/cprc/TTM/detailedoverview.htm (accessed March, 2007). **"**Detailed Overview of the Transtheoretical Model Material adapted and updated for this Website from**:** Velicer, W. F,

been applied to a wide variety of health behaviors including smoking cessation, exercise, low fat diet, radon testing, alcohol abuse, weight control, condom use for HIV protection, organizational change, use of sunscreens to prevent skin cancer, drug abuse, medical compliance, mammography screening, and stress management. The focus of the model is on the time dimension of change, arguing that individuals must go through several stages as they move closer to taking the desired action: precontemplation, contemplation, preparation, action, and finally maintenance. The model classifies individuals at different stages on the path towards an action, rather than grouping together individuals who may be at different pre-action stages of the decision process. The TTM model also explicitly allows for regression to previous stages, characteristic in health as well as financial programs. The TTM model explicitly recognizes that different types of programs may be more or less successful at moving individuals at different stages towards action, thus accounting for different "success" rates even in identical programs with different client groups. Thus, TTM is a potential tool in understanding not only variation in effectiveness measures and therefore required evaluation designs across financial programs targeted at different audiences but also in improving instructor understanding of how evaluations elucidating the stages at which clients are can improve their own teaching effectiveness.[25]

Interest in the model's application to financial education arises from the same puzzles that face health educators: why do individuals not modify behavior in ways that would be beneficial to their long term (financial) health, often failing to modify behaviors that promise to cause further deterioration in their (financial) health? The TTM model argues that understanding at which stage individuals are and how they respond to education at those stages may be critical to the ability of financial education efforts to change actual behavior. Kerkman (1998) and Shockey and Seiling (2004) and Xiao et al. (2004) have written on the application of the TTM model to understanding and improving investment behavior.[26] Shockey and Seiling (2004) provided one of the early analytical applications of TTM to financial education, analyzing the ability of the "Making Your Money Work" curriculum to increase savings by Individual Development Account (IDA) program participants. It is important to note that the TTM model provides the behavioral *context* but does not itself provide either the financial *content* or the financial education program (delivery method); the financial content model was provided by the Financial Education for Savings (FES) Model, which works through "financial goal setting, planning and tracking spending and savings, reducing debt, and measuring the success of their

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Prochaska, J. O., Fava, J. L., Norman, G. J., & Redding, C. A. (1998) Smoking cessation and stress management: Applications of the Transtheoretical Model of behavior change. Homeostasis, 38, 216-233."

[25] In August 2005, the National Endowment for Financial Education hosted a financial literacy symposium (*Closing the Gap Between Knowledge and Behavior: Turning Education into Action)* in which one of three main areas of focus was the application of TTM to financial educational interventions

[26] Kerkman, B. C. (1998). Motivation and stages of change in financial counseling: An application of a transtheoretical model from counseling psychology. *Financial Counseling and Planning*, *9*(1), 13-20; Shockey, S. S., & Seiling, S. B. (2004). Moving into action: Application of the Transtheoretical Model of Behavior Change to financial education. *Financial Counseling and Planning, 15*(1), 41-52; Xiao, J. J., Newman, B. M., Prochaska, J. M., Leon, B., & Bassett, R., & Johnson, J. L. (2004).
Applying the transtheoretical model of change to debt reducing behavior. *Financial Counseling and Planning, 15*(2), 89-100.

financial management strategies." The financial education program was the "Making Your Money Work" curriculum, covering the content required for the IDA program and providing it at a level specific to the low-income individuals eligible for IDA participation. As described by the authors, the curriculum focused on developing specific money management behaviors. While the evaluation's goal was to gather information on the effectiveness of the curriculum, the authors somewhat unusually for the literature also point out that "Data collected provided information on the participants *for* the instructors and the sponsoring organizations."

Also fairly unusual for the evaluation literature is this article's suggestion that evaluations can be useful feedback tools for teachers and participants. Notable also was the careful description of a behavioral model of desirable action, use of a financial behavioral model, both of which guided the application of a particular financial curriculum.

Economic behavioral models add to potential understanding of how individuals use (or do not use) information that is available to them. Conclusions of Mullainathan and Thaler (2001) suggest caution is needed in assuming that greater knowledge leads to improved financial conditions since overconfidence in and overreactions to new knowledge may lead to more risky behaviors.

While clearly the intent of financial literacy programs is to mitigate the consequences of shortfalls in financial well-being, there is in fact little empirical evidence of what financial knowledge is effective in changing those behaviors. Rather, the assumption is that knowledge of financial facts and relationships will lead to improved financial outcomes for consumers at some time in their financial lives. Most financial literacy programs are described and evaluated without consensus on what is the knowledge that is necessary to alter the targeted financial behavior and on the best way to deliver desired information. This is a major challenge for educating general school audiences.

Lyons, Palmer, Jayaratne, and Scherpf (2006) summarize well the current state of our knowledge about financial education:

> In recent years, numerous programs and initiatives have been developed to promote and provide financial education to U.S. consumers. However, research measuring the effectiveness of these efforts has not kept pace. In fact, little is still known about whether these efforts are actually improving consumers' overall financial well-being. There are a number of reasons why research in this area has been limited. First, there is a general lack of evaluation capacity. Many financial education providers still do not have a basic level of understanding and knowledge about how to measure program impact to show that these programs are working. The lack of evaluation capacity is compounded by a general lack of time, staff, and financial resources to conduct program evaluations (p. 208).

Financial capacity does not mean just the lack of time and resources to design effective evaluations. It also means a basic understanding of what outcomes are expected and the underlying reasoning for why the program being evaluated should lead to the expected outcome(s). It also requires valid research designs that compare students or clients in a

financial education program with a group that can claim to be comparable but without the program. The validity of evaluations of financial education are typically threatened by selection effects (e.g., students most motivated to learn volunteer for or are selected into a course), by noncomparable comparison groups (e.g., students in a program are compared with students from different communities and backgrounds), by maturation (e.g., all individuals become more knowledgeable over time) and by the inability to measure causal effects over time (e.g., rather than correlations between program and outcome).

Models of teaching effectiveness are sorely lacking in financial literacy program development and evaluation. The TTM model implies the provision of differentiated interventions depends not only on factors such as students' prior knowledge and developmental level, but also on the stage of change at which individuals present themselves. This suggests a major challenge for teachers providing general financial education in a classroom with students of diverse backgrounds and experiences. What the TTM model does suggest is that secondary students may be at a different stage of change than are adult students or individuals who seek financial counseling for specific reasons. Without understanding that difference, programs and teachers may not be effective in changing high school student behavior.

So what about the teachers themselves and what they may bring to the financial education setting?

Financial Issues among Pre-Service and In-Service Teachers

Teachers' academic specialties and student assignments are likely to be important considerations in designing teacher education programs focused on helping individuals build capacity to provide financial education. Perhaps even more fundamental, however, is a consideration of the financial issues teachers themselves face. A well-known set of theories about learning, constructivism, suggests that people build (construct) new understanding based upon the nature of their existing knowledge structures and their unique experiences within social contexts (Atherton, 2005). This is the belief that what we see and how we deal with it depends on what is already in our minds (termed *cognitive constructivism*) and how we are engaged with others during opportunities for learning (*social constructivism).* Learning something new might, for example, require that we first "unlearn" something to which we have long subscribed. Learning may also be facilitated or impeded by the nature of interactions with others (e.g., providing help when needed or putting someone 'on the spot' for public ridicule in the learning environment). Constructivism suggests that teachers' own knowledge structures and experiences with financial matters can determine their ability to acquire new knowledge in the area and play an important role in what and how they choose to teach (or not teach).

Teachers' financial issues are also important for a second related reason, and that is because financial education seeks to make a difference in people's behavior and not just in their knowledge. Behavior change theory, such as Prochaska's Transtheoretical Model of Change, which was described in the previous section (Prochaska, DiClemente, Velicer, Ginpil, & Norcross, 1985), suggests that change starts with one's mental model. As

noted earlier, Prochaska's model outlines six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination. In this view, the key to developing successful programs is to meet people where they are in terms of stage of change, and customize help to move toward subsequent levels. This may include identifying perceived barriers to change and using specific processes. Prochaska identifies 10 that can facilitate forward movement. The 10 processes are: Consciousness Raising (education, information); Dramatic Relief (stories of life changes that illustrate pros and cons of behavior change); Environmental Reevaluation (realizing social benefit to others); Self-Reevaluation (seeing a healthier future); Self-Liberation (willpower, commitment to change); Reinforcement Management (learning how to give oneself positive reinforcement); Helping Relationships (finding social support); Counterconditioning (substituting healthy alternatives for unhealthy ones); Stimulus Control (getting rid of unhealthy cues or behaviors); Social Liberation (social changes that help people behave more positively).

Teachers may find it beneficial to change their own behavior as well as facilitate change among their students. Changing one's own behavior is often thought of as a necessary first step to being able to help others change theirs, because it provides greater insight into the change process and increases opportunities to model desired behavior.

College Students/Pre-Service Teachers. Today's college students are experiencing a number of serious financial problems and there is at least some evidence that students preparing to become teachers may be more at risk financially than others. One of the concerns for all college attendees is that student financial aid has not kept pace with rising college expenses over the past few years. The College Board recently reported that tuition, fees, room, and board increased 52 percent at public four-year universities and 37% at private four-year universities between 2000-01 and 2006-07. Most agree (Block, 2006) that Pell Grants, the most common source of direct financial aid for low-income students, have failed to keep pace with college student financial needs. Although the American Recovery and Reinvestment Act, signed into law in February of 2009 provides $15.6 billion to increase the maximum Pell grant from $4850 to $5350 in 2009-2010, concern about the adequacy of financial aid, especially for low-income populations remains. High college costs are often cited as a main contributor to the college dropout rate, which now includes one in every four college freshmen (Whitbourne, 2002). Rising college costs are also being blamed for an increase in the average student debt load upon graduation in recent years; totaling more than $19,000 per person in 2003-04 when considering both public and private student loan sources (Block, 2006; Democratic Policy Committee, 2006). Debt loads of this magnitude raise concerns about whether teacher education graduates can afford to enter teaching as a career or meet basic financial needs if they do. A recent report by the Public Interest Research Group's Higher Education Project concluded that 25% of public university graduates and 38% of private university graduates could not afford to repay their student loan debts on a beginning teacher's salary (Block, 2006).

The problem of student loan debt is further compounded by the fact that college students as a whole are increasing their credit card usage. Due both to increased costs of college and aggressive marketing by the credit card industry, 96 percent of college students now

have credit cards and they carry an average of six. The bad news is that the typical college senior graduates with an average of $3,262 in credit card debt; beyond any outstanding student loans they may have (Draut & Silva, 2004).

Research indicates that college students preparing to become teachers come from homes with lower annual incomes than those in non-education majors, making them potentially more vulnerable than others to financial pitfalls such as not being able to meet college tuition needs and/or resist multiple credit card offers (Zumwalt & Craig, 2005). One meta-analysis of 44 studies found that two-thirds of teacher education students were first-generation college attendees (Book, Freeman, & Brousseau, 1985), an important proxy for socioeconomic status. More recent research (AACTE RATE VII, 1994) reveals that the number of teacher education students with college-educated parents is increasing (51% in 1994) but still does not match the numbers in other majors. Long-standing disparities in income among individuals from majority and minority populations are similarly reflected among teacher education students. A 1988 study, for example, found that white teacher candidates were more likely to be from higher income families than others (AACTE RATE II, 1988), suggesting there may be further important within-group differences based on race.

An additional confounding background factor may be age. The average age of persons entering teacher education programs has been increasing in recent years, due to the growth in post baccalaureate teacher education programs and the number of students taking more than four years to complete their baccalaureate degrees (Zumwalt & Craig, 2005). Feistritzer (1999) found, for example, that the median age of teacher education students was 22.4 years for undergraduates and 30.2 years for graduate students. Students who are older are arguably more likely to have had life experiences that better prepare them to manage their own financial matters and teach financial education to others. Chen and Volpe (1998) found, for example, those students under the age of 30, and those with little work experience, had lower levels of personal finance-related knowledge than others.

Little is yet known, however, about how such background factors may affect future teachers' interest in and capacity to provide financial literacy education. Lucey and Giannangelo (2006) and Shug, Wynn, & Posnanski (2002) have speculated that environmental influences may affect both financial learning and personal financial judgments among young people. They point out, for example, that persons growing up in low-income contexts may have less access to resources that build capacity for financial management (for example, less access to financial education at home and school, to banking services, and financial technology) and may face greater pressures that challenge sound financial decision-making (e.g., predatory lenders, limited choices of consumer goods and/or vendors). The present study does not explore education students' family backgrounds but does attempt to provide some insight into the personal financial concerns that may affect their capacity to teach personal finance topics.

In-Service Teachers. Practicing teachers are likely to share many of the same financial concerns as the general adult population, particularly those in the middle class (e.g., the 50 percent of American households that had incomes between $22,500 and $75,000 in

2004) (Wikipedia, 2007). Recent economic analyses have concluded, for example, that the typical American middle-class family is not doing as well economically today as in past decades due to a combination of stagnant incomes and cost increases for basic items such as housing, health care, transportation, and education (Weller, 2005). Thus, middle class families as a whole have been dealing with the economic disparities by working more and taking on greater household debt (Weller, 2005).

Teachers may arguably be facing greater economic challenges than other adults with comparable demographic backgrounds. Much literature continues to discuss the issue of what teachers are paid, for example, compared to those who are employed in professions requiring similar levels of education. Most studies conclude that the average annual pay for teachers has not only failed to keep up with inflation, but has also actually fallen over the past 60 years in comparison to the annual pay of other workers with four-year college degrees (e.g., Hurley, 2002; Mishel, 2004; Winans, 2004). While teachers typically work only 9 months per year compared to the usual 12 months for other full-time employees, teachers face strict continuing education requirements which can often only be met during the off-payroll summer months, and for which they must usually pay themselves. And, teachers can't always easily find supplemental short-term summer employment even when they want to. Moreover, research indicates the college-educated non-teacher makes over 50 percent more than the average teacher (Weaver, 2005). For males, the difference is 60 percent more; much beyond that which could be explained by the disparity in months worked alone. The difficulty of, and need for teachers' work is widely acknowledged (Winans, 2004). However, teachers may find it more difficult than their peers to meet daily living expenses and address long-term financial needs, despite the demands or agreed-upon worth of their occupation.[27]

Besides being denied pay commensurate with worth, teachers may also be disadvantaged—and therefore in need of financial education—because of the same forces that are motivating the call for more personal finance education in schools. Teachers are increasingly responsible for their own financial futures and vulnerable to fraudulent offers. For example, the 403(b) investment plan, created as part of the Internal Revenue Code in 1958 to allow teachers and other nonprofit employees the chance to accumulate retirement savings on a tax-deferred basis, has historically given employers no fiduciary responsibility because the plans are typically voluntary. Teacher advocates have argued that the rules created "open season" for vendors selling low-yield financial products but provided little or no investment guidance for those who must live with the purchases. Currently the majority of 403(b) funds are invested in variable annuities, combinations of mutual funds and life insurance, that have higher commissions and fees than mutual funds alone, and that thus result in lower long-term asset accumulation (Washburn, 2005; Crane, 2006). State legislation has begun to address some of these concerns. For example, the state of California enacted a law in 2002 that requires all companies that sell 403(b) plans to register their products with the California State Teachers' Retirement

[27] The 2008-09 may have challenged teachers' budgets and tightened job markets for teachers. At the same time early layoffs were more likely among blue collar employees than service workers and professionals. How the financial crisis will affect teachers relative to other occupational groups will only be seen over time.

System and the bill also set up a state website, 403bCompare.com designed to help teachers become more informed about the 403(b) investment choices available to them. The IRS has also finally adopted new regulations that give employers greater fiduciary responsibility with respect to 403(b) plans, including requiring a written plan. The formal plan requirement was originally to take effect on January 1, 2009. However implementation has been delayed until December 31, 2009 (Retirement Plans, 2008). Despite these improvements, there is still widespread concern that too few teachers are taking advantage of the 403(b) option (only 2 of every 5 teachers in 2007 according to Otter & Moore) and a likelihood that most teachers will have relatively little guidance in selecting from among the vast array of retirement plan options available (Washburn, 2005).

Another issue facing teachers is the rising cost of health care and the apparent trend of many public school districts to limit costs of health benefits paid to current employees, retirees, or both (Toppo, 2006). Although this is similar to what's been happening to some degree in corporate America, the impact could well be more widespread for teachers. Health insurance coverage for teachers has been nearly universal in recent years (Podgursky, 2003), and has often been seen as justified compensation for teachers' relatively low wages. However, an aging teaching force, skyrocketing health care costs (which grew nearly twice as quickly as costs overall in the U.S. between 2001 and 2005 according to Weller, 2005), and new federal accounting standards compelling school districts to factor in future as well as current costs, have created a "perfect storm" (Toppo, 2006) that is threatening even these benefits. Many states have either changed or are considering changing benefits for both active teachers and retirees, including increasing eligibility waiting periods and insurance premiums, increasing co-payments for doctor visits and prescription drugs, and restricting access to providers (House Resource Organization, 2003; Toppo, 2006). There is ample evidence that such changes are putting added pressure on teachers' personal budgets and in some cases, even changing plans for retirement (Flannery, 2006; Toppo, 2006). In addition, some have also speculated that such changes could interfere with school districts' efforts to recruit and retain highly qualified teachers (Flannery, 2006).

While there are several issues, such as those regarding pay and benefits, that may be experienced by all teachers, the literature suggests that there may also be important within-group differences concerning the financial issues teachers face. For example, the "economic squeeze" being experienced in recent years by middle class families in general has been greater for minority populations than whites. Inflation-adjusted income declined 3.6 percent overall between 2000 and 2004, but 5.9 percent for Hispanic families and 7.3 percent for African Americans (Weller, 2005). And, although the majority of public school teachers are White, non-Hispanic (84% according to NCES, 2006), there is evidence that race and ethnicity are not uniformly distributed according to teacher age. Minority teachers tend to be slightly older on average than White teachers (AACTE, 1999; Kirby, Naftel, & Berends, 1999), with African Americans disproportionately represented among teachers with more than 20 years of experience. Henke, Choy, Chen, Geis, & Alt (1997) have also found that persons with Hispanic and Asian backgrounds are represented to greater degrees than would be expected among teachers with fewer than 3 years experience. Since financial opportunities, needs, and

management options vary with age as well as race/ethnicity, these may be important to consider, singly and in combination, when creating financial education strategies designed to serve teachers.

An additional consideration is the fact that a large percentage of public school teachers are females; 74.5% in the 1999-2000 school year (NCES, 2003). Female teachers not only make less, on average, than male teachers (12.7% less annually in 1999-2000), but they are less likely to be represented in higher paying educational administrative positions such as school principal, superintendent, or director of school finances. Because pay is a major determinant of the value of employer-sponsored pension accounts, such disparities are known to contribute to women's relative vulnerability during retirement (Richardson, 1990). Other factors that have been found to disadvantage women during retirement are limited knowledge about their pension plans (DeVaney & Kim, 2003) and women's tendency to engage in deliberate retirement planning to a more limited degree than men (Richardson, 1990). All of these factors indicate that gender may be a key consideration in designing financial education programs for present and prospective teachers.

Teachers' Capacity/Readiness to Teach Financial Literacy Education

Recognizing that pre-service and in-service teachers may face a number of personal financial issues that need to be addressed may be an important first step in preparing this group of educators to meet the financial education imperative for K-12 learners. But, what else is known about teachers' capacity or readiness to provide effective personal finance education?

One approach to gauging teachers' readiness to provide financial education would be to ask for self-report data; that is, how prepared do teachers themselves feel for the task? No direct studies of this kind could be located. However, it is interesting to note the National Center for Education Statistics has conducted a more generic national survey of teacher preparation twice in the last decade (Parsad, Lewis, & Farris, 2000). The data from 2000 indicated that while 96 percent of teachers felt very well or moderately well prepared to meet the overall demands of teaching, much smaller percentages felt prepared to implement new methods of teaching (45%), implement state or district curricula (44%), or address the needs of students from diverse cultural backgrounds (32%). Professional development appears to help, however. Teachers who said they spent over eight hours engaged in professional development related to a topic or activity were more likely than those who spent fewer hours to feel prepared to address it.

A more direct, and perhaps more fruitful way to look at teacher readiness to provide personal finance education is to examine the research on effective teaching; and in particular, what has been learned about what effective teachers believe, what they know, and what they are able to do. Most syntheses of this vast body of literature highlight the importance of several categories of teacher dispositions, teacher knowledge, and teacher thinking (Arends, Winitzky, and Tannenbaum 2001).

***Teacher Dispositions*.** Teacher dispositions, the tendency to act in certain ways under specific circumstances, are thought to be something that can be both taught and learned (Arends, Winitzky, and Tannenbaum, 2001). Researchers have found that *caring, expectations, and collegiality* exhibited by teachers are important predictors of student achievement. Thus, they could be relevant to teachers' preparedness to provide financial literacy education.

What is viewed as 'caring' behavior may vary with culture, class, or situation. However, studies have shown that if students perceive their teacher(s) as genuinely committed to helping them succeed, they will work harder and achieve to a greater degree than otherwise (e.g., Wentzel, 1997). Research spanning the past 30 years has revealed that teachers' expectations for student performance also produce similar differential results; if the expectations about what students can achieve are high, students do better (Arends, Winitzky, Tannenbaum, 2001). A concern, however, is that numerous studies have shown teachers sometimes hold unconscious expectations for students that disfavor those who do not share the teacher's own background characteristics (Rist, 1970). This is something to watch, given current disparities between the relatively homogeneous demographic characteristics of the teaching force (predominantly White, female, and from modest economic backgrounds) and the much more diverse K-12 student population (Zumwalt & Craig, 2005). For example, if students are not seen as caring about their finances, or coming from a background that does not value or practice sound financial management, teachers may expect less and interact with the students accordingly.

It used to be that teachers' work was studied mainly from the perspective of within-classroom interactions with students. However, more recent inquiry has highlighted the importance of considering relationships beyond those with students that extend outside the classroom—with teacher-peers, administrators, parents, and community members (Bryk & Schneider, 2002; Newman, Secada, & Wehlage, 1995). Since financial literacy education can potentially be taught in more than one subject area and may even vary by subject over time, and curricula often recommend involving parents as well as members of the local financial services community, successful implementation could be determined in part by the degree to which teachers understand and are able to cultivate educational relationships beyond the classroom.

Teacher Knowledge. Besides having certain dispositions regarding students and educational relationships, research on teaching has revealed that effective teachers are those who value knowledge (i.e., think it is important and that it can make a positive difference in people's lives) and are able to draw on several specific kinds of knowledge related to the subject(s) they teach and education (Arends, Winitzky, & Tannenbaum, 2001; Shulman, 1987). These include the following:

- ►Knowledge of Subject Matter
- ►Knowledge of Other Content
- ►General Pedagogical Knowledge
- ►Knowledge of Educational Aims
- ►Knowledge of Curriculum
- ►Knowledge of Learners

► Pedagogical Content Knowledge

Little research could be located that examined the extent to which prospective and/or practicing teachers are interested in or value personal finance subject matter. In a survey of Indiana K-12 teachers, McCormick (2005) did find a high level of agreement that financial education subject matter was important (4.1 out of 5.0), with middle and high school teachers expressing greater support for the subject (4.4 and 4.3, respectively) than elementary teachers (3.6).

Only two studies were identified that examined prospective and practicing teachers' subject matter knowledge in this area. Both were conducted in the late 1970's. Garman (1979) examined the consumer education knowledge of graduating teacher education students and Lofgren & Suzuki (1979) assessed the consumer education and personal finance knowledge of practicing teachers. Using a 55-item instrument based on the 1972 Illinois Guidelines for Consumer Education and a national sample, Garman (1979) found that overall, newly certified teachers answered only about 60 percent of the questions correctly. Graduates were most knowledgeable about topics related to purchase of certain goods and services in the marketplace and least knowledgeable about saving and investment (50% of items correct) and taxes (45% of items correct). No significant differences in knowledge were found in relation to students' socioeconomic background. However, male graduates had significantly higher scores than females; those certified to teach secondary education had higher scores than those in elementary education; and those who had taken a consumer education course in college had higher scores than those who had not. New graduates certified to teach social studies, science, and home economics had the highest knowledge scores while those prepared to teach special education, art/music, and physical education had the lowest.

Lofgren and Suzuki (1979) used a 50-item instrument based on the Oregon Personal Finance Education Guide in their study of practicing teachers' consumer education/personal finance knowledge. The instrument addressed five topic areas (employment and income, money management, credit, purchase of goods and services, and rights and responsibilities in the marketplace) and teachers with backgrounds in business education, home economics, math and social studies were surveyed. Only one-third of all teachers answered at least 70 percent of the items correctly and fewer than 8 percent answered 80 percent correctly. No significant differences were found among the teacher groups in overall knowledge levels, however, math teachers scored significantly higher on the items related to money management. Although no more current research could be located, it may be that K-12 teachers are now more knowledgeable about personal finance subject matter than they were many years ago, given recent calls for expanding personal finance education for youth. This question deserves more attention, however, since recent studies of financial literacy among more general adult populations have concluded that levels of financial literacy are still far from optimal (see, for example, Alexander, Jones, & Nigro, 2001; Hogarth, 2002; Yakoboski & Schiffenbauer, 1997) and further, vary according to such factors such as age, gender, educational level, income, and race (O'Neill & Ziao, 2006).

Another set of issues that needs greater attention is the extent to which present and prospective personal finance teachers possess knowledge of state and national standards (educational aims) for personal finance education and knowledge of curriculum and teaching resources available for use in this area. (See Appendix A for additional information about state and organizational standards for financial literacy education and Appendix B for an overview of some of the financial education programs and instructional materials that have been shown to produce positive outcomes for learners). Teachers' pedagogical content knowledge; that is, knowledge about how to represent key concepts in the field such as how to provide effective examples, demonstrations, analogies and/or explanations (Arends, Winitzky, & Tannenbaum, 2001) also needs further attention. Most programs designed to provide teacher training and development related to personal finance education address both personal finance content and pedagogy (see Appendix C for a description of some of the in-service education programs now available). And although most of these teacher education efforts appear to use identifiable conceptual frameworks for subject matter content (e.g., the Jump$tart Curriculum Standards and/or state education standards), little attention is given to using specific theoretical frameworks grounded in the pedagogical literature. (Note: The Family Economics & Financial Education (FEFE) Project (http://fefe.arizona.edu) does purport to design materials to promote active learning and address the "multiple intelligences model" and the High School Financial Education program of the National Endowment for Financial Education (NEFE) (www.nefe.org) highlights the importance of communication and active listening for both learning and effective financial behavior and contrasts a content-based approach with the standards-based (problem solving) approach used. However, attention to these kinds of pedagogical constructs is relatively rare in instructional materials. This is not surprising.

Until quite recently, much of the research in teacher education generally was a-theoretical and focused primarily on technical action. One of the most recent reviews of research in teacher education (Clift & Brady, 2005) concluded that although more recent teacher education research is stronger both theoretically and methodologically, serious limitations persist. Among these are concerns that multiple frameworks (dominated by cognitive theory but also including symbolic interactionism, activity theory, discourse theory, and cultural capital theory) are used among researchers in different teacher education content areas with little articulation across them, and that terminology describing teaching practice/methodology is often not well defined and sometimes fails to distinguish between concepts of teaching and learning. An example of this issue is reflected in a recently published analysis of the challenges of teaching a pre-service economics education methods course for secondary social studies teacher certification students (Joshi & Marri, 2006). The researchers purported to use "constructivism" as the form of pedagogy modeled in the course; however, constructivism is generally regarded as a learning theory rather than a theory of teaching or teacher education (Clift & Brady, 2005). One further concern is that a preponderance of the research has been characterized by short-term studies that do not yield insight into longer-term processes such as the development of individual teaching practice as modified by teaching context and/or impact of teaching practice on student knowledge and/or behavior.

There is a growing consensus that personal finance education should seek both to enhance subject matter knowledge and promote positive behavior change (Hilgert, Hogarth, & Beverly, 2003; Lerman & Bell, 2006). It is also recognized that personal finance education is just as likely to be taught across the curriculum as within stand-alone courses (NCEE, 2004). Although it would be helpful to know to what extent teachers are familiar with financial education aims focused on knowledge development and behavior-change, their familiarity with the relation of these aims to disciplinary content standards, and their understanding of how to help learners attain recommended educational goals, no studies could be identified that have sought to do any of these things. The absence of research along these lines is one reason we investigate prospective and practicing teachers' awareness of and ability to use personal finance standards (e.g., Jump$tart Coalition Standards, and state standards). It would be useful to know whether they were aware of other standards—those embedded in national disciplinary standards such as those for family and consumer sciences and business education; state standards—and of the wide array of available financial education programs and instructional resources. In particular, more needs to be known about teachers' familiarity with pedagogical models for enhancing conceptual complexity, and models for promoting behavior change. Several models for promoting behavior change are available and have been used fairly extensively in other subject fields, most notably health education. Besides the stages of change model attributed to Prochaska (1985) earlier in this document, other useful models include the consumer information process model, social cognitive theory, and diffusion of innovations model (see, for example, Glanz & Ericksen, 1993).

One final aspect of teacher knowledge that could be important to teachers' capacity to provide effective financial education is their understanding of learners' financial background and context and in particular, any differences that may exist among learners based upon such factors as race/ethnicity, class, and gender. For example, a good deal of research has focused on identifying characteristics of culturally sensitive curriculum and pedagogy (e.g., Ginsberg & Wlodkowski, 2000; Ladson-Billings, 1997 and 2001). However, no studies could be located that examined preparation of teachers to provide culturally sensitive financial literacy education.

Teacher Thinking. Teachers' thinking patterns and instructional behaviors have also been shown to be associated with teacher effectiveness and could be important in preparing individuals to provide personal finance education. One body of theory and research has contrasted the different thought processes used by expert versus novice teachers (e.g., Berliner, 1986; Sternberg & Horvath, 1995). Synthesizing studies of expertise across a diversity of professional fields, Sternberg & Horvath (1995) proposed that expert teachers have more thoroughly integrated knowledge structures, encompassing both content and teaching methods, than novices; are able to use this knowledge to tailor lessons more effectively for specific audiences (e.g., considering what learners already know as well as the learning context); and are also able to more effectively solve problems that arise during the teaching-learning process. The development of expertise has been the subject of a good deal of research among cognitive psychologists. Researchers have concluded that expertise evolves over time and in gradations (Pressley & McCormick, 1995) and is related to one's interest and opportunity as well as focused practice in the specific domain (Norman, 1992). Thus, in looking at

teachers' capacity to teach personal finance education, it seems appropriate to look at the personal experiences they have had with financial matters as well as the professional development opportunities, and the relation between them.

Donald Schon (1986) has pointed out that many of the problems and challenges teachers face involve dealing with competing values and priorities, which can only be successfully addressed if teachers have a reflective, problem-solving orientation. Schon characterized this as the ability to practice both the *art and science* of teaching and contrasted it with a technical rationality which construes good teaching as simply applying structured methods to produce pre-determined ends. The problem, according to Schon, is that the technical mind-set fails to account for the need to re-examine educational ends and how they are determined. Although many would suggest that financial education is a "technical" subject with easily identifiable goals, we argue that personal finance education is a highly value-laden subject involving competing priorities and power relations at both the individual and societal levels. Effective personal finance teachers are likely to be those who are able to reflect on their *practice in-action* (and considering their own values as well as those held by "professional experts" and their students), and use these insights to build instruction that flexibly fits the situation.

Unfortunately, very little information is available about the relation between teachers' characteristics and preparation, and learner outcomes. The few studies that could be located about financial literacy teacher training were evaluations of short-term programs. One went as far as examining impact of the training on teachers' classroom behavior (Baron-Donovan, Wiener, Gross, & Block-Lieb, 2005), but did not include measures of student impact. Again, this is not surprising. Clift & Brady (2005) point out that we currently have little empirical evidence of how teaching practice in general plays out in K-12 school settings, and that researchers have been slow to build on the very few studies of this kind that have been done (e.g., Monk, 1994).

III. METHODOLOGY

The data for this study come from three surveys: of K-12 teachers, students in Schools of Education, and Education School faculty in eight states. This investigation of the preparation and capacity to teach personal finance topics required individual-level data on training, teaching experiences, and opinions about ability to teach. While we were not surprised at the absence of teacher-based surveys on training and experience in teaching personal finance, we were surprised at the absence of a data base from which to draw a representative sample of teachers, students, or faculty whom we could survey on these issues. Hence we had to both construct a survey that obtained these data and construct a sampling frame. As described in this section, in each of eight selected states we surveyed K-12 teachers, faculty in Schools of Education in a University, and teachers-in-training in those same schools. Budget constraints limited the number of states we were able to select.

To achieve a sample representative of the U.S., in its diversity of populations and state personal finance teaching standards we selected two states from each of the four census regions. The final selection of states was made based on where we were able to obtain the cooperation of Schools of Education in surveying their own education faculty and teachers in training. In this sense, there is an element of "convenience" sampling, but we believe the variation across states in training and standards leads to a fairly representative sample of the three groups. Table III.1 lists the states and Schools of Education from which education faculty and pre-service student survey participants were recruited. These states also gave us a range of personal finance requirements for graduation or teaching. The requirements by state are summarized in Appendix D.

Table III.1 - States and Schools of Education Participating in the Study

Region/state	University
Western Region	
California	*California State University - Fullerton*
Colorado	*Colorado State University*
Southeast Region	
Georgia	*University of Georgia*
Virginia	*Virginia Tech*
Northeast Region	

New Jersey	*Rutgers University*
Pennsylvania	*Pennsylvania State University*
Midwest Region	
Iowa	*Iowa State University*
Wisconsin	*University of Wisconsin-Madison*

All surveys were accessed by respondents logging onto a web site at the University of Wisconsin and accessing an on-line survey through WebSurvey@UW. This service is available through the UW-Madison Division of Information Technology and delivers anonymous survey responses to researchers in various file formats, including Excel and SPSS (Statistical Package for the Social Sciences).

To encourage response to the surveys, we offered the opportunity for respondents to win one of 25 lottery prizes—$200 gift cards to the retailer Best Buy (a strategy that was also included as part of the instrument pre-testing with all three survey groups). Names of respondents who indicated they wished to participate in the lottery were entered into a drawing to select prize winners. A total of 26 prizes were awarded as follows: 16 to pre-service students, 8 to K-12 teachers, and 2 to university faculty. Two prizes were also awarded as part of the instrument pilot testing process for a total distribution of 28 $200 gift certificates.

K-12 Teacher Sample

Our aim was to survey a representative sample of teachers currently teaching K-12 students in the eight states. In each state, we first identified the public school districts in different size cities that had email addresses of their teachers available through the internet. Cities were identified as small, medium or large using a 2008 version of the Rand McNally Road Atlas. City size was defined as: small – 49,000 or below; medium – 50,000 – 199,000; and large – above 200,000. One elementary, middle and high school was then randomly selected in each of the three school districts in each of the eight states. Thus, in each state we attempted to survey teachers in three different and differently sized school districts and in nine different schools within those districts for a total of 24 school districts and 72 schools.

We sent a letter to all teachers whose emails we obtained, asking them to access a web based survey (Appendix E). Four follow-up reminders were sent to these same emails. We received a total of 504 valid responses to the K-12 teacher survey. This 15 percent "response rate" is of all emails sent and is not a true response rate of all eligible persons

since we do not know the actual number of eligible respondents, or even the number who actually received the initial request or reminders. It is likely some emails were no longer valid. A screening question asked if the respondent was currently teaching at the K-12 level; the on-line survey instrument was unable to count the number who exited the survey at the screen. In order to assess the representativeness of this sample, we compare characteristics of our respondents to national data in Section IV.

Pre-service Student Sample

Our aim was to interview students who were currently preparing to teach at the K-12 level. Respondents were students currently enrolled in a teacher education program at each of the eight institutions which agreed to participate in the study. Four of the institutions provided lists of e-mail addresses of currently enrolled teacher education students and we contacted those students directly via e-mail with the request to participate in the study. Rather than provide student e-mail lists to us directly, administrators at four of the institutions chose to send our requests for survey participation to students themselves. Thus, we provided the initial and follow-up cover letters to our contacts at those institutions and they forwarded them to students for us. The survey and letter requesting teacher education student participation in the study can be found in Appendix F. Four follow-up requests were also sent to this group of survey respondents.

The pre-service student findings are based on 627 usable responses, which was 17 percent of all emails sent. In contrast to the K-12 email addresses, student addresses were all most likely current. However, in addition to the usual reasons for non-response to an email request (including emails identified as spam), some students may not have met the initial screening criterion of being a currently enrolled teacher education student and exited after the initial screening question. Additional characteristics of the pre-service teacher education student sample are provided in Section V.

University Teacher Education Faculty

Email addresses were obtained for teacher education faculty in the identified Schools of Education through a search of on-line faculty directories. As was the procedure for the two earlier surveys, faculty were emailed a letter requesting completion of a web-based survey (Appendix G) and four follow-up requests were used to boost survey responses. A total of 103 usable responses were received which represented a 17.7% response rate for all e-mails sent.

Surveys/Variables

The three surveys (Appendices E-G) were written to ask for comparable information across the surveys about respondents' teaching preparation and subjective opinions about capacity to teach personal finance topics. The surveys obtained data on:

1. Respondents' training and education in personal finance or financial literacy.

2. Respondents' teaching or training to teach financial literacy topics
3. Respondents' own experience in dealing with personal finance issues outside the classroom
4. Respondents' own personal financial concerns
5. Respondents' perceived ability/competence in teaching PF topics
6. Respondents' opinions about the importance of teaching personal finance topics in their discipline
7. Respondent's opinions about the readiness of teachers in their discipline to teach personal finance topics
8. Willingness of respondents to participate in further education on teaching personal finance

The K-12 teacher and teachers-in-training were asked almost identical questions on prior education and teaching experiences, on financial concerns, and interest in further education. The faculty survey focused on their experience with and views on the importance of teaching financial literacy topics. Because the faculty survey was intended to discover what was being taught in the teacher education programs, rather than faculty members' own financial concerns, there were fewer questions on their own training and personal concerns and more questions on the personal financial literacy training offered in their programs.

Protection of Human Subjects

Prior to data collection, institutional review board (IRB) approval for the conduct of research involving human subjects was secured in accordance with policies established by the University of Wisconsin-Madison. These policies cover data collection, analysis and reporting in research involving human subjects and call for the researchers to address such issues as informed consent and maintenance of confidentiality for individual respondents. Further information about the guidelines and procedures regarding the human research protection program at the University of Wisconsin-Madison is available through the Graduate School website at:
http://info.gradsch.wisc.edu/research/hrpp/submissioninstructions.html.

Data Analysis

Both descriptive and inferential statistics were used to analyze the data gathered through the on-line surveys. Inferential analyses included use of Chi-square, analysis of variance, and multivariate logistic regression techniques as dictated by the nature of the questions posed and variable scales.

IV. RESULTS: K-12 TEACHERS

The findings of the K-12 teacher sample are based upon the responses of 504 teachers or 15.1% of those who were sent e-mails requesting participation. A comparison of the geographic and demographic characteristics of the teacher respondents with national data on teachers suggests that the sample is reasonably representative of K-12 teachers nationally.

Sample Characteristics

Geographic Distribution. Table IV.1 presents the distribution of K-12 teacher respondents and of all teachers nationally across the four regions and the eight states. Compared to their share of teachers nationally, the Midwest and Southeast regions are overrepresented in our sample, as are the four states in those regions. The Western and Northeast regions are underrepresented in our sample, but in each region one state is overrepresented (e.g., Colorado in the Western region) and one is underrepresented (e.g., California). This difference is not unexpected since by intent and design in each state we sampled schools from only one city of a specific size. Thus cities (and therefore their teachers) of each size group are equally represented across the states in our sample, even if they are not in fact. Thus, respondents from states with more large cities (e.g., California, Pennsylvania) would be underrepresented and states with a single large city (e.g., Colorado) overrepresented. This was by design to assure sufficient sample size in small school districts. Table IV.2 shows that we were able to achieve this—the distribution of our sample by city size (and by implication by school district size and characteristics) shows we have, if not a distributionally representative sample, a sample that reflects the diversity in teachers' experience.

Table IV.1 – K-12 Teacher Distribution Across Regions and States

	NEFE Sample		National Data
Region/state	Number Respondents	% Distribution by region/state	% Distribution by region/state
Western Region	119	27.0	37.9
California	29	6.0	32.3
Colorado	90	18.5	5.6
Southeast Region	158	35.9	22.1
Georgia	71	14.6	11.6
Virginia	87	17.9	10.5
Northeast Region	97	22.0	27.2
New Jersey	82	16.8	12.9
Pennsylvania	15	3.1	14.2
Midwest Region	99	22.5	12.8
Iowa	36	7.4	4.3
Wisconsin	63	12.9	8.5

Source of U.S. data: NCES (n.d.) Table 1; NEFE Sample: calculations by authors.

Table IV.2 presents the distribution of respondents across cities by size, showing our sample is distributed across districts in different size cities. City size is, of course, important in terms of access to financial education resources available for both personal and professional use and so we wanted our sample to reflect the effect.

Table IV.2 – Distribution of K-12 Teachers' School by City Size

City Size	**% of Teachers**
Under 50,000	18.0
50,000 – 199,000	39.3
200,000 – 499,000	25.9
50,000 or more	16.7

Because the sampling frame consisted of schools with publicly identifiable teacher e-mail addresses, one concern was whether those schools represented a higher-than-average income level than districts without such an advanced web-based presence. Such economic disparity, if present, could be an important reflection of school- and/or teacher-related personal finance expertise and experience. To explore this question, we compared child poverty rates in the states with the rates for school districts from which the sample was obtained.[28] Nationally, 16.4 percent of children ages 5-17 live in families with incomes below the federally defined poverty level (U.S. Census, 2007a).[29] As shown in Table IV.3, in 2007 the majority of the school districts had poverty rates above their state's average with 11 of the 24 school districts reporting child poverty rates above the national average and 13 below (U.S. Census, 2007c). Some schools in our sample were in districts with one-quarter or more of their children living in poor families. This suggests that our sample is not drawn from relatively better off school districts.

[28] Because we collected no data on students in the sampled schools nor asked teachers about their students, we cannot directly compare poverty rates for students in the sampled schools.
[29] In 2007 the official poverty threshold was $21,027 for a 4-person family (U.S. Census, 2007b).

Table IV.3 - Child Poverty Rates in the Sample States and Size of School District				
State	**State Child Poverty Rate (Ages 5-17)**	**Sampled School District Child Poverty Rates By City Size**		
		Small	Medium	Large
New Jersey	10.4	26.1	7.6	25.7
Iowa	11.7	8.3	16.6	14.6
Virginia	11.9	12.3	24.1	8.5
Wisconsin	12.9	11.9	9.1	14.7
Colorado	14.0	9.7	8.5	14.4
Pennsylvania	14.6	20.1	20.2	31.7
California	16.2	33.9	5.7	11.6
Georgia	18.1	27.8	20.5	34.4

Demographic Characteristics. The K-12 teacher respondents closely mirrored the characteristics of K-12 teachers nationally in terms of gender, race/ethnicity, marital status, and educational level. Nearly three-fourths (71.3%) of the respondents were female, and a majority were white (83.9%), and married (71.2%) (see Table IV.4). Respondents were slightly younger and less experienced than teachers nationally, perhaps reflecting familiarity with and/or openness to participating in on-line surveys. The sample had a median age of 43 compared to 46 years of age for teachers nationally and had a median of 10 years of teaching experience compared to the national average of 14 years. Virtually all held a bachelor's degree and slightly over half (51.8%) held a master's degree (Table IV.5).

Table IV.4
K-12 Respondents' Gender, Race/Ethnicity, and Marital Status

	NEFE Sample	National Data
Male	28.7%	25.0%
Female	71.3%	75.0%
Race/Ethnicity		
White	83.9%	83.1%
Black	9.3%	7.9%
Hispanic	3.6%	6.2%
Other (Am Ind.; Asian, Pac Is)	3.0%	2.7%
Marital Status		
Married	71.2%	73.1%
Never Married	14.6%	15.2%
Div/Wid/Sep	13.3%	11.7%

Source: Gender & Race: NCES (2007d) Table l1; Marital Status: NCES (2007c) Table 66 . NEFE: calculations by author.

Table IV.5
K-12 Respondents by High Degree Completed

Percent Completing	NEFE Sample	National Data
Bachelors	45.8	43.1
Masters or Specialist Degree	51.8	56.0
Doctorate	1.7	0.8
Other (incl < BA)	0.8	0.2

Source: See Table IV.4.

Respondents, who were sampled to assure study participants from elementary, middle and high schools, also represent a wide range of disciplinary teaching assignments (see

Tables IV.6 and IV.7). How disciplines were categorized into these categories is described in Table IV-A at the end of this section.

Table IV.6 – Primary Grade Level Taught by K-12 Teacher Respondents

Grade Level	**% of Respondents**
Pre K – 2nd	9.9
3rd – 5th	12.4
6th – 8th	31.0
9th – 12th	53.9

Table IV.7
K-12 Respondents' Primary Teaching Discipline

Teaching Assignment	**Percent**
Elementary Education	14.4
Special Education	13.4
Art & Music	5.7
English / Language Arts	13.6
ESL	1.5
Foreign Language	5.2
Health Education	3.5
Mathematics	13.8
Natural Science	9.6
Social Sciences	9.4
Voc / Tech Education	9.4

Teaching Personal Finance: Teachers' Preparation and Experience

Descriptive Statistics. We asked teachers about courses they had taken for credit and workshops they had attended that had personal finance content. Questions asked about courses that provided basic information on what teachers might be asked to teach—and courses that included how to teach. Only slightly more than one third (n = 186; 37%) of the teacher respondents reported that they had ever taken any college coursework with financial education-related content. As shown in Table IV.8, the course most frequently reported having been taken was macro- or microeconomics followed by consumer economics, personal/consumer finance, and finance and investments. Fewer than 3 percent had taken a college course that had content related to the teaching of personal finance. In a society where increased personal responsibility is being required for financial decisions and where schools are being asked to teach personal finance, this low percentage is disturbing both in terms of competency in personal financial management and in terms of teaching competency.

Table IV.8 - College-Level Financial Education Coursework Reported by Respondents

Course Title	N	Percent[a]
Macro/Microeconomics	135	27.8
Consumer Economics	51	10.1
Personal/Consumer Finance	44	8.8
Finance and Investments	33	6.6
Consumer Education	29	5.8
Family Economics	25	5.0
Consumers and the Market	21	4.2
Risk and Insurance	18	3.6
Family Resource Mgt.	14	2.8
Methods of Tching Per.Fin.	13	2.6
Other (e.g., accounting)	6	1.2

[a] Multiple responses may be given.

We also asked teachers about workshops they had taken, since teachers prepared prior to the current push for personal financial education in schools or those in areas in which personal finance is not a traditional area of study, may have sought training after degree completion. However, even fewer teachers said they had attended non-credit workshops related to personal finance topics, although it is not possible to say whether this is due to lack of interest, lack of access or both. As shown in Table IV.9, only 18.9 percent of respondents reported having taken a non-credit workshop on financial education subject matter in the past three years and only 11.6 percent reported having taken a non-credit workshop on teaching financial education during the same time period. While school districts are the more important providers of non-credit workshops on teaching financial education, teachers are more likely to have attended workshops provided by financial planners and financial institutions. We suspect this content was not oriented in ways most appropriate for K-12 students' financial education.

Table IV.9 - Teacher Attendance at Non-Credit Personal Finance-Related Workshops		
Workshop on Personal Finance Subject-Matter provided by a:		**Total = 18.9%**
Financial Planner	8.5%	
Financial Institution	4.6%	
Professional Organization	4.2%	
School District	3.5%	
Religious Organization	3.0%	
Other (e.g., nonprofit)	1.4%	
Workshop on Teaching Financial Education provided by a:		**Total = 11.6%**
School District	7.1%	
Professional Organization	3.4%	
College/University	2.0%	
State Education Agency	2.0%	

Although very few of the K-12 teachers reported having taken formal courses or workshops on financial literacy topics, they do seek out financial information through more informal avenues and for the purpose of addressing their own financial well-being. When asked whether they had ever engaged in several different financial planning practices, for example, about half (50.4%) of the teachers said they had consulted a professional financial planner, a third (33.8%) said they had consulted a benefits specialist at their place of employment, and nearly one-fourth (23.3%) indicated they had attended a workplace presentation on a financial topic. It appears that as a group, teachers do recognize the importance of having financial information, but see it as a topic more for personal than professional use and something to be attended to as needed episodically (e.g., at a teachable moment such as at the time of a new employment benefit offering or application for a mortgage), rather than studied more formally and as a broader subject.

When asked whether they had ever taught financial literacy topics, less than a third of the respondents (29.7%) reported that they had done so. Of these respondents, the largest percentage (25.5%) reported having integrated financial literacy topics into a regularly offered credit course they taught in another subject area rather than offering it as a separate, stand-alone course. Only 5.2% reported teaching a separate elective personal finance course, only 1.3% a separate required personal finance course, and only 1.3% a non-credit personal finance course.

Multivariate analysis. Several multivariate logistic regression analyses were used to determine how, if at all, teachers' background related to the likelihood that they would have taken or taught a formal course or workshop with personal finance content. We included demographic characteristics of teachers as well as disciplinary teaching areas

and state standards. The expectation was that state mandates would raise the probability of teachers in those states having taken and teaching such a course. Likewise teachers in particular disciplines may be more or less likely to include personal finance content or examples in their lessons. Table IV.10 compares the characteristics that predict having taken and having taught such a course. Predictors with a statistical significance level of $p \leq .05$ are highlighted.[30]

Gender and subject-matter background are the only statistically significant predictors of the probability of having taken a for-credit course with personal finance content. Female teachers were about half as likely as male teachers (the reference group) to have taken a formal course related to personal finance. And, compared to elementary education teachers (the reference subject-matter group), all other groups of teachers except social studies teachers of vocational subjects were equally likely to have taken a personal finance course. Social studies teachers were over three and a half times more likely and those teaching vocational subjects (including family and consumer education) nearly five times as likely to have taken a personal finance-related course.[31] This is consistent with the traditional expectations that family and consumer education and social studies teachers would teach this content area. None of the other variables entered into the equation were significant, including whether the state had policies related to personal finance education.

[30] Odds ratios of 1.0 indicate the same likelihood as the reference group; odds < 1.0 a lower likelihood compared to reference group; and odds > 1.0 a higher likelihood compared to the reference group.
[31] The largest sub-group of teachers in the vocational education category was family and consumer education teachers (37% of this sub-group) followed by business education teachers (23% of this sub-group).

Table IV.10 – Likelihood of K-12 Teachers Having Taken and Taught a Course with Personal Finance Content

	Have Taken a Course			Have Taught a Course		
Variable	**Odds Ratio**	**Robust Std Err.**	**P>|z|**	**Odds Ratio**	**Robust Std. Err.**	**P>|z|**
Years Exp	0.98	0.01	0.18	1.01	0.01	0.25
Gender	**0.55**	**0.13**	**0.02**	1.46	0.43	0.19
Race	0.63	0.20	0.14	1.41	0.55	0.38
Marital Status	1.23	0.29	0.39	1.11	0.31	0.70
State Stndrs						
Testing	1.27	0.33	0.35	0.97	0.30	0.92
Content only	1.15	0.33	0.62	0.76	0.25	0.40
Had course				**3.43**	**0.93**	**0.00**
Only wkshp				1.56	0.64	0.27
Povertyrate	1.01	0.01	0.31	0.99	0.02	0.57
Discipline						
SpecialEd	1.45	0.56	0.34	2.25	1.03	0.07
Art/Music	0.54	0.32	0.30	0.82	0.62	0.79
English/LA	0.95	0.37	0.90	0.44	0.25	0.14
ForeignLan	0.89	0.51	0.84	0.88	0.58	0.84
Math	0.81	0.32	0.59	**4.08**	**1.84**	**0.00**
NaturalSci	1.15	0.49	0.75	0.31	0.22	0.10
SocialStud	**3.41**	**1.52**	**0.01**	**3.59**	**1.68**	**0.00**
Voc/Tech	**4.83**	**2.18**	**0.00**	**6.45**	**2.97**	**0.00**
Other	1.00	0.48	0.99	0.41	0.29	0.21

Having taken a course for credit is an important predictor of whether a teacher ever had taught a course with personal finance content (Table IV.10, column 4). Those having taken a course were more than three times likely to teach a course, even when controlling for teaching in the areas (social studies and vocational subjects) where having taken a course was more likely. Compared to the reference group of elementary education teachers, those with backgrounds in vocational education and social studies were more likely to teach a course, as they had been more likely to take a course with personal finance content. Teachers of math and special education were also significantly more likely to report having taught financial education even though they were no more likely to have taken a course. Interestingly while females were significantly less likely to have taken a course, they were no less likely than male teachers to teach personal finance topics. Neither of the state requirement variables were significant.

The finding that training and teaching is concentrated in a few disciplines is perhaps not surprising. Historically, vocational education programs (now also referred to as 'career and technical education') such as family and consumer education and business education programs have taken a leadership role in developing and implementing personal finance

curricula at the secondary school level because their teacher certification programs incorporate relevant coursework (Lofgren & Suzuki, 1979). Social studies and math teachers have also participated in these efforts because they are also often seen as teachers who either a) have relevant subject-matter backgrounds and/or b) teach courses in which personal finance content could be integrated easily. However, while social studies teachers are more likely to have taken a personal finance course, math teachers are not.

Teachers' Opinions on Personal Finance Education

Constructivist learning theory suggests that teachers' beliefs about a subject area—how it should be taught, and to whom, as well as their beliefs about things such as the capability of different groups of learners and how expertise develops—are important determinants of teacher effectiveness. In order to reflect on such beliefs, teachers in the present study were asked a number of opinion questions about financial education, including in which grades and subject areas they thought financial education should be taught.

Educational Requirements. Despite the minority of teachers who themselves had had formal course work in personal finance topics (or perhaps because of it) teachers do widely believe financial education should be required for high school students and that teachers in their own disciplines should be better prepared than they are. We asked teachers whether they agreed or not with several statements about requiring financial education in high school or lower grades as well as the importance of teachers being prepared to teach financial literacy topics in their own disciplines.

As shown in Table IV.11, all but 11 percent of teachers strongly or moderately agreed that students should either be required to take a financial education course or pass a financial literacy test for high school graduation.

Table IV.11 – Teachers' Opinions Regarding Financial Education Requirement

Percent agreeing or not:	Strongly Disagree	Moderately Agree	Strongly Agree
Students should be required to take a FL course or pass a literacy test for high school graduation	11.0	42.8	46.2
It is too complicated for elementary school children	48.6	42.9	8.5

Importance of Personal Finance Topics in Disciplines. Although financial education standards typically apply to students in both elementary and secondary grades (at least those outlining recommended content to be taught) many teachers apparently question its relevancy for the lower grades. Almost half of the teachers agree with the statement that financial education is too complex a topic for elementary school children. When asked specifically "At what grade level should financial education be taught?" 92.2 percent agreed that it should be taught at grades 9-12 and about two-thirds (63.5%) selected middle school. Only a minority saw it as appropriate at the elementary school level: 36.9 percent said it should be taught at grades 3-5 and only 15.8 percent at the PK-2 grade level. Clearly, teachers see financial literacy as a high school topic, and to a lesser degree perhaps appropriate for middle school students.

Even if teachers think financial literacy is an important topic of education for students, we wanted to know if they thought it important for teachers to be trained in their own disciplines. That is, we wanted to know whether the concentration of training in and teaching by teachers in the vocational and social studies disciplines was consistent with where teachers themselves considered it should be taught. Table IV.12 shows that indeed, few of the teacher respondents see financial literacy as something that should be a major part of their own subject matter area (only 10.1%). One in five (20.5%) do not believe it should be incorporated into their subject area at all. Yet about three-fourths of teachers do believe it is *somewhat* (50.7%) or *very* (24.9%) important for teachers in their area to be prepared to teach financial education, although much smaller percentages (about 44%) believe that teachers are correspondingly somewhat or very well prepared to do so. The results suggest that on average, a majority of teachers are at least moderately supportive of incorporating financial education into their subject areas, but recognize the lack of preparation they and/or their disciplinary peers have to do so.

Table IV.12 – Perceived Relevance of Financial Education in Own Subject-Matter Area

	Not at All	Limited Degree/ Somewhat	Major Part/ Very
Should FL be incorporated in your subject matter area?	20.5%	69.6%	10.1%
How important is it for teachers in your area to be prepared to teach FL?	24.4	50.7	24.9
How prepared are teachers in your area to teach FL?	56.2	40.0	3.8

As might be expected, opinions about teaching financial education vary greatly across disciplines. Table IV.13 shows the percentages of respondents who gave the most negative responses to the three questions in Table IV.12 about teaching financial education in their areas, by respondents' discipline. Disciplines are ordered in ascending order by percentages in column 1. Responses correspond, by discipline, to those in

column 1 of Table IV.12—the percentages of teachers who gave the "not at all" response to those three questions. If teachers thought their disciplinary peers were well prepared to teach financial literacy to the degree important for the discipline, one would expect the percentages across each row to correspond.

Table IV.13
Perceived Relevance and Preparation to Teach Financial Literacy: by Own Subject-Matter Area

Respondent's Discipline	Not incorporate	Not important	Not prepared
Voc/tech	5.4	5.4	13.5
Special education	5.8	3.9	43.1
Social studies	7.7	7.7	43.6
Mathematics	8.5	1.7	45.8
ESL	16.7	16.7	83.3
English and literature	23.2	35.7	76.8
Elementary education	28.1	29.8	61.4
Foreign Language	31.8	50.0	72.7
Health Education	40.0	53.3	64.3
Natural Sciences	41.0	56.4	74.4
Arts and music	47.6	42.9	81.0

The areas where teachers were most likely to be trained (vocational education and social studies) and to teach (these two plus math) financial literacy are those in which teachers are least likely to respond that financial literacy is not important. Special education teachers also fall into this group of educators least likely to respond that financial literacy is not important. Teachers in vocational/technical education are least likely to agree (5.4%) and those in arts and music are most likely to agree (47.6% or nearly half) that financial education should not be incorporated into the discipline they teach (column 1). As would be expected, teachers' perceptions of the importance of being prepared to teach financial education parallel those about incorporation into the subject area; if a teacher doesn't think it is important to teach the material, then preparation to teach is also seen as not important (column. 2).

However, a far higher percentage of teachers see their disciplinary peers as unprepared to teach financial education as report financial literacy is not important to incorporate into their discipline. Indeed teachers in all disciplines believe preparation lags behind the importance of training to teach financial education topics. Thus, while virtually all math teachers believe it is important for teachers in their discipline to be prepared to teach financial education, 46 percent think mathematics teachers are not adequately prepared to

do so. This is consistent with the results in Table IV-10 that show math teachers to be no more likely (than elementary school teachers) to be trained to teach but more likely to teach personal finance topics. However, social studies and special education teachers report this same disparity. Only vocational education teachers perceive their peers are prepared to teach these topics. It is interesting that all disciplines, even those in which financial literacy topics are less likely to be taught, report *less* negative views of the importance of preparation than of the level of preparation to teach in their discipline.

Teachers' Perceived Competency to Teach Financial Topics. To gain a sense of teachers' perceptions of their own preparedness to teach personal finance education, teachers were asked how competent they felt to teach specific topics included in educational standards such as those identified by the Jump$tart Coalition (2007) and in the National Endowment for Financial Education High School Financial Planning Program (2007). As shown in Table IV.14, relatively few teachers reported feeling very competent in any of the areas identified. The topic areas for which teachers reported feeling most competent to teach were income and careers and planning and money management, but fewer than 20 percent selected the 'very well prepared' option in these areas. Teachers reported feeling least competent in the more specific areas of risk management and insurance, saving and investing, and financial responsibility and decision-making. Over half of the teachers felt 'not very competent' to teach risk management and insurance and nearly half felt 'not very competent' to teach about saving and investing.

Table IV.14 - Teachers' Perceived Competency to Teach Financial Literacy Topics

Topic Area	**Not Very %**	**Adequately %**	**Very %**
Income and Careers	26.6	54.1	19.3
Planning and Money Management	31.7	50.2	18.1
Credit and Debt	33.3	49.9	16.9
Financial Responsibility and Decision Making	40.8	46.5	12.7
Saving and Investing	46.4	41.8	11.9
Risk Management and Insurance	52.7	39.1	8.2

Multivariate logistic regression analyses yielded some interesting findings about teachers' background characteristics that contribute to perceived lack of competency to

teach personal finance topics. Table IV.15 shows predictors of who stated they did *not* feel competent to teach in each of six the areas. The log-odds present the odds (compared to the excluded category) of the teacher saying they did not feel competent to teach the particular topic.

The results are generally consistent with the evidence presented in Table IV.10 about teachers' preparation to teach financial literacy. Having had a college course in a personal finance-related subject area was a major predictor of teachers' perceived competence to teach personal finance. Having had a course reduces the probability of saying one was not competent to teach in that area by about one half across all disciplines, with the possible exception of risk management and insurance.[32] This finding is consistent with a constructivist view of learning which suggests that one's existing knowledge structure can affect one's ability to acquire new knowledge (Atherton, 2005).

Females, who were significantly less likely than male teachers to have taken a course with personal finance content but not less likely to teach a course (Table IV.10), were one and one-half to two times more likely to report lack of competence to teach topic areas beyond income and careers, financial responsibility, and credit and debt. Also consistent with early findings about those most likely to take a course with personal finance content is the greater likelihood of teachers in vocational education fields feeling competent to teach in each of the six personal finance topics compared to teachers in the excluded group of elementary education. The results for social studies and math teachers are interesting given that teachers in these disciplines, as was the case for vocational education teachers, are more likely to teach a course with personal finance content. Along with teachers in many other disciplines, social studies and math teachers are less likely to report lack of competency to teach, what we would label the less financial technical areas, listed in the top bank of Table IV.15, but no less likely to express lack of competency in the areas in the lower bank of Table IV.15.[33] Math teachers do express more confidence in teaching savings and investment, which may reflect the relevance of some savings and investment concepts (e.g., compounding) to mathematical competency.

In states where educational testing or courses are mandated, teachers expressed no difference in teaching competency. This is consistent with earlier results in Table IV.10 that these state mandates had no influence on whether teachers had taken a course or had taught a course in personal finance.

[32] We evaluate significant coefficients at the <.05 level. Small sample size reduces the power of statistical tests and so we do not ignore the possibility that results that just miss statistical significance levels may be due to Type II errors (the inability to detect results when they are true).

[33] It is interesting to note that special education teachers reported feeling significantly more competent than the comparison group to teach in three of the six personal finance topics including financial responsibility, income and careers, and planning and money management. These are topics are often emphasized in secondary school programs for vulnerable special populations, especially those focused on the transition from high school to young adulthood (Levine & Wagner, 2005).

Table IV.15 – Teachers' Perceived Lack of Competency to Teach Personal Finance Topics: By Area of Competency (1= not very competent; 0=else)

Variable	Financial Responsibility			Income and Careers			Planning and Money Management		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Years Exp	1.01	0.01	0.40	1.01	0.01	0.30	**1.03**	**0.01**	**0.03**
Gender	1.06	0.27	0.83	0.97	0.27	0.90	**1.68**	**0.46**	**0.05**
Race	1.61	0.53	0.15	1.30	0.46	0.46	0.69	0.26	0.31
Marital Status	0.77	0.19	0.30	0.86	0.23	0.55	0.96	0.25	0.89
State Stndrs									
Testing	0.71	0.20	0.23	1.13	0.33	0.67	0.87	0.24	0.61
Content only	0.61	0.18	0.11	0.66	0.22	0.21	0.57	0.18	0.08
Had course	**0.47**	**0.11**	**0.00**	**0.56**	**0.15**	**0.04**	**0.52**	**0.14**	**0.01**
Only wkshp	0.86	0.29	0.66	0.50	0.20	0.09	**0.46**	**0.18**	**0.05**
Povertyrate	0.97	0.01	0.06	0.99	0.02	0.48	0.99	0.02	0.35
Discipline									
SpecialEd	**0.41**	**0.17**	**0.04**	**0.18**	**0.09**	**0.00**	**0.30**	**0.14**	**0.01**
Art/Music	0.43	0.24	0.13	0.46	0.25	0.16	0.49	0.27	0.20
English/LA	0.52	0.21	0.10	**0.31**	**0.13**	**0.00**	0.75	0.30	0.47
ForeignLan	**0.36**	**0.19**	**0.05**	0.35	0.20	0.07	0.61	0.34	0.37
Math	**0.43**	**0.17**	**0.04**	**0.31**	**0.13**	**0.00**	**0.29**	**0.13**	**0.00**
NaturalSci	0.49	0.21	0.10	**0.35**	**0.16**	**0.03**	**0.39**	**0.18**	**0.04**
SocialStud	**0.36**	**0.17**	**0.03**	**0.21**	**0.11**	**0.00**	0.91	0.42	0.84
Voc/Tech	**0.25**	**0.12**	**0.00**	**0.12**	**0.07**	**0.00**	**0.18**	**0.10**	**0.00**
Other	1.39	0.71	0.52	0.54	0.26	0.19	0.88	0.42	0.79

Variable	Credit and Debt			Risk Management and Insurance			Savings and Investment		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Years Exp	1.01	0.01	0.26	1.00	0.01	0.90	1.00	0.01	0.87
Gender	1.58	0.40	0.07	**1.63**	**0.40**	**0.04**	**1.93**	**0.47**	**0.01**
Race	0.69	0.24	0.28	1.06	0.35	0.85	1.01	0.32	0.97
Marital Status	0.99	0.25	0.97	1.08	0.25	0.74	0.83	0.20	0.42
State Stndrs									
Testing	0.76	0.22	0.33	1.05	0.28	0.85	0.73	0.20	0.25
Content only	0.60	0.19	0.10	0.60	0.17	0.07	0.67	0.19	0.17
Had course	**0.54**	**0.13**	**0.01**	0.69	0.16	0.11	**0.46**	**0.11**	**0.00**
Only wkshp	0.84	0.31	0.65	0.78	0.26	0.46	0.67	0.23	0.23
Povertyrate	0.98	0.02	0.17	0.98	0.01	0.13	0.99	0.01	0.65
Discipline									
SpecialEd	0.51	0.23	0.13	0.64	0.27	0.30	0.62	0.26	0.24
Art/Music	1.25	0.67	0.68	0.84	0.46	0.75	0.74	0.41	0.58
English/LA	**0.38**	**0.16**	**0.02**	0.56	0.22	0.15	**0.46**	**0.18**	**0.05**
ForeignLan	0.34	0.20	0.07	0.60	0.31	0.33	0.48	0.25	0.16
Math	0.59	0.23	0.18	0.51	0.20	0.09	**0.34**	**0.13**	**0.01**
NaturalSci	0.54	0.25	0.19	0.52	0.24	0.15	0.68	0.32	0.41
SocialStud	0.41	0.20	0.06	0.70	0.32	0.44	0.50	0.23	0.13
Voc/Tech	**0.27**	**0.14**	**0.01**	**0.30**	**0.14**	**0.01**	**0.42**	**0.19**	**0.05**
Other	1.31	0.62	0.57	0.94	0.45	0.89	0.50	0.25	0.16

Curriculum Development and Additional Training

The analysis of our survey data indicates that both training and teaching is focused on teachers in social studies and vocational disciplines, including business education and family and consumer education, although across virtually all disciplines teachers report that teachers in their own discipline should be better prepared to teach financial literacy topics than they are. Our analysis also documents that teachers feel less competent to teach the areas of personal finance that are typically the target of financial education programs—credit and debt, risk management, and savings and investment. Female teachers are more likely to express lack of competence in these areas, perhaps because they were far less likely to have had a college course with any personal finance content. Interestingly, math teachers were far less likely to have taken such a course, but are more likely to have taught a course with personal finance content, although that content may be because they are able to introduce savings and investment as an application of mathematical principles.

Given this expressed discrepancy between preferred and actual competency in personal finance pedagogy, we next explore teachers' knowledge of curriculum development tools that have been developed specifically for personal finance and their willingness to participate in further training. Part of the survey asked teachers how well qualified they felt in four pedagogical domains related to personal finance education. These included familiarity with material that has defined educational aims for personal finance and their perceived ability to design curriculum, employ instructional strategies, and address learner needs.

Knowledge of personal finance curriculum standards. As shown in Table IV.16, a vast majority of teachers reported being not well qualified to use either the Jump$tart standards for personal finance education or their state standards for financial education (71% and 64%, respectively). Additionally, another 17 percent and 15 percent (respectively) reported not being familiar with these educational tools for establishing curriculum goals. It is interesting to note that the number of teachers reporting they felt 'not well qualified' to use personal finance education standards is far greater than the number reporting they felt 'not very competent' to teach the various personal finance topics or subject matter areas (Table IV.14). As noted in the literature review for this study, research on teaching has revealed that effective teachers are able to draw on several different kinds of knowledge related to the subject(s) they teach and educational pedagogy (Arends, Winitzky & Tannenbaum, 2001; Shulman, 1987). The fact that a disparity apparently exists between teachers' perceived competence related to personal finance subject matter and competence to employ personal finance educational aims serves as a reminder of the importance of considering different kinds of teacher knowledge in designing programs to nurture teacher development.

Table IV.16 – Teachers' Perceived Qualification to Use Standards for Designing Personal Finance Education Programs				
Type of Standard	**Not Well Qualified**	**Adequately Qualified**	**Very Well Qualified**	**Not Familiar With**
Jump$tart Standards	71.0%	8.4%	3.4%	16.9%
State Standards	63.8%	15.8%	5.7%	14.7%

Perceived ability to design curricula. Besides widely feeling unqualified to use these two types of personal finance educational standards, teachers also reported feeling limited in their ability to design disciplinary-specific curriculum and resources, employ instructional strategies and assess specific learner needs. As shown in Table IV.17, over half of teachers reported feeling 'not well qualified' to integrate financial education concepts into their discipline, use on-line learning resources, modify financial education methods and content for diverse learners, or develop examples to explain financial concepts. Similar numbers reported feeling 'not well qualified' to determine how students' social/cultural background relates to financial understanding or to assess the impact of instruction on students' financial behavior.

Preferences Regarding Pedagogical Practices. We asked teachers who had ever taught financial literacy topics (29.7% of respondents) a few questions about their preferences regarding teaching methods that might be employed to implement financial education. Teachers, whether or not they had taught a course, were generally open to team teaching (only 16% said they were not). Collaboration with parents and the local financial services community were also viewed positively. Over one third (38%) strongly agreed with the statement that they would encourage parental involvement (only 10% would not), and 31 percent agreed strongly with the statement that "concepts and courses are most effective if the teacher collaborates with local financial services." While 61 percent only moderately agreed with that statement, only 9 percent disagreed. This shows that overall, teachers are open to collaboration and classroom assistance as strategies for providing financial education.

Table IV.17 – Teachers' Perceived Qualification in Other Pedagogical Domains: Personal Finance Curriculum and Students

Pedagogical Domain	Not Well Qualified	Adequately Qualified	Very Well Qualified
Design Curriculum and Resources			
Integrate FL concepts in your discipline(s)	54.6%	36.8%	8.7%
Use on-line FL learning resources	55.9	34.0	10.1
Employ Instructional Strategies			
Modify FL methods and content for diverse learners	58.0	33.3	8. 7
Develop examples to explain FL concepts	60.0	32.2	7.8
Assess Learner Needs			
Students' FL understanding	49.3	39.3	11.4
How social/cultural background relates to FL understanding	54.3	35.8	9.8
Degree to which instruction affects students' financial behaviors	56.9	36.2	6.9

Teachers' Willingness to Participate in In-Service on Teaching Financial Education. Given the broad assessment by teachers that their colleagues are more limited to ability to teach personal finance topics than desirable and that they themselves lack competency in personal finance subject matter and pedagogy, we assessed the willingness of teachers to participate in additional training. Teachers responded in a manner that we assess as consistent with their expressed beliefs about the importance of incorporating the subject matter into their own discipline (Table IV.12). Less than one-fourth of teachers said they would be very likely to participate (Table IV.18) and another half of the teachers reported being indifferent (perhaps). For those likely to consider it, the preferred formats are those which have traditionally served teachers for purposes of accreditation and pay advancement—credit courses and face to face.

Table IV.18 – Teachers' Willingness to Participate in Financial Education In-Service

	N	Percent
Would participate in FL in-service education:		
Very Likely	94	22.2%
Not Very Likely	219	26.2
Perhaps	111	51.6
Preferred format:		
Credit Courses	249	49.5
Face-to-face	185	36.8
Distance Education (e.g. online)	117	23.3
Concentrated (e.g. weekend)	115	22.9
Non-credit Courses	102	20.3
Self-paced	93	18.5
Extended (e.g. semester)	43	8.6

As shown in Table IV.19 teachers who have had a college course for credit related to personal finance are nearly twice as likely to express willingness to participate in further education related to teaching financial education while those with a B.S. or less are half as likely as those with a degree beyond the B.S. The gender variable is not statistically significant but is consistent with previous results showing they are less likely to have had a course, more likely to teach a course, and more likely to express lack of competency to teach.

Table IV.19 - Predictors of Teachers' Willingness to Participate in In-service Related to Financial Education

Variable	**Odds Ratio**	**Std. Err.**	**P>|z|**
Yrs Exp	0.99	0.02	0.42
Gender	1.54	0.45	0.14
Race	0.67	0.21	0.21
Marital Status	0.80	0.21	0.40
State Standard			
Testing	1.07	0.32	0.81
Standard only	1.26	0.40	0.47
Previous Course	**1.78**	**0.46**	**0.02**
Teach < HS	0.65	0.17	0.09
Beyond BA	**0.56**	**0.16**	**0.04**

Table IV.20
Predictors of Teachers' Willingness to Participate in In-service Related to Financial Education (with Subject Matter Background)
(1= very likely, 0=else)

Variable	Odds Ratio	Std. Err.	P>|z|
Years Exp	0.99	0.01	0.45
Gender	1.39	0.42	0.29
Race	1.51	0.54	0.25
Marital Status	0.84	0.23	0.54
State Standards			
Testing	1.11	0.37	0.74
Content only	1.14	0.40	0.70
Had course	1.50	0.41	0.14
Only wkshp	1.02	0.47	0.97
Povertyrate	1.01	0.02	0.54
Discipline			
SpecialEd	1.42	0.65	0.45
Art/Music	0.43	0.36	0.32
English/LA	0.72	0.35	0.50
ForeignLan	1.01	0.61	0.99
Math	0.88	0.44	0.80
NaturalSci	0.64	0.39	0.46
SocialStud	0.96	0.53	0.94
Voc/Tech	**3.90**	**1.86**	**0.00**
Other	0.99	0.58	0.99

Adding disciplinary areas in Table IV.19 suggests that teachers in only one particular area are significantly more interested in in-service education than others (Table IV-20). Teaching in one of the vocational education areas increases the likelihood (and by nearly four times) of a teacher saying they would be very likely to participate in in-service related to financial education. These teachers were the ones most likely to have had a college course, and so that independent effect becomes insignificant.

This concentration in additional education in one area—where previous training and current teaching is most likely—is consistent with answers to questions about what additional education or resources they would need if they were interested in developing coursework in the area of financial education. Close to half of the respondents (46.3%) overall said they would not be interested in developing financial education curriculum or courses. But of those who said they would be interested in developing such coursework, about half reported they would need more information on obtaining curriculum and materials (48.0%) and nearly as many (42.9%) said they would need more guidance on standards.

K-12 Teachers' Personal Financial Experiences and Concerns

As discussed in the literature review presented earlier, there is a substantial body of scholarship that suggests expertise develops over time and in multiple contexts. Thus, teachers' interest in and capacity to teach personal finance education (e.g., what they believe is important to teach and ideas about methodologies for doing so) could well be a function of personal financial experiences as well as professional development opportunities.

Financial experiences. When we asked the teachers about the kinds of personal financial experiences they had had, we found, not surprisingly perhaps, that as a group, teachers are quite engaged in the personal finance system. The percentage of teachers reporting various kinds of experiences is given in Tables IV.21 and IV.22. A large majority of the teachers had purchased real estate property for personal use, contributed to a retirement account or plan, and applied for a loan other than a mortgage. Slightly over half had purchased stocks and bonds outside of a retirement account and developed a financial recordkeeping system.

Table IV.21 - Teachers' Personal Financial Experiences

Percent who have ever:

Purchased real estate property for personal use	83.4%
Contributed to a voluntary employer-sponsored retirement account	73.4
Applied for a bank or credit union loan other than a mortgage	72.9
Contributed to another retirement plan such as an IRA	71.0
Often/always planned and set goals for your financial future	70.0
Purchased stocks, bonds, mutual funds apart from retirement accounts	54.5
Developed a financial recordkeeping system	54.2
Created a legal financial will and/or an estate plan	34.8

When we asked the teachers whether they practiced a number of financial behaviors that are typically recommended to ensure financial security, we found, not surprisingly given their education and employment status, that the teachers were more likely to be engaged in many of these practices than is the average for US households (see Table IV.22). Using comparative data from a 2001 survey of consumers commissioned by the Federal Reserve Board (Hilgert, Hogarth, & Beverly, 2003), we found that teachers in the present sample were more likely than all US households to say they pay all bills on time, review their credit report, save or invest money out of each paycheck, maintain a fund for unexpected expenses, read about money management and prepare their own personal income tax. The teachers did fall short of the national average in some other areas of money management, such as reconciling their checkbook every month, paying credit card balances in full each month, using a written spending plan, and calculating net worth.

However, this may be because we asked about individual financial behavior and not whether their household engaged in these activities.

Table IV.22 - Teachers' Financial Practices Compared to U.S. Households

Percent who have done the following in the past year:

	NEFE Survey	***US Households***
More Likely than U.S. households		
Usually paid all bills on time	92.6	88
Reviewed credit report	74.3	58
Saved or invested money out of each paycheck	74.0	49
Maintained a fund for unexpected expenses	70.6	63
Read about money management	53.8	20
Prepared own personal income tax	49.1	40
Less Likely than U.S. households		
Reconciled checkbook every month	57.2	75
Paid credit card balances in full each month	54.1	61
Used a written spending plan	38.0	46
Calculated net worth	37.8	40

Although teachers do seem to be engaged in many financial practices which would be widely viewed as positive, we note that these experiences are all likely to be adult-oriented in both content and methodology. This means that not only are the experiences likely to have presented personal finance as complex but also to have emphasized personal finance-related values and goals typically found among those with at least middle class socioeconomic backgrounds. Only slightly more than one-third (37%) of the teachers in this study reported ever having taken a personal finance-related college course and only about 12 percent reported having taken a noncredit workshop on teaching personal finance. Thus, it is quite possible that K-12 teachers may shape their ideas of what personal finance education is and should be through their own personal financial experiences rather than through professional development focused on how to teach with methods and materials appropriate for the diverse body of K-12 students. We have no way of knowing the impact on student learning from the findings of this study. However, we believe the question bears further examination.

Teachers' Personal Financial Concerns. We asked teachers whether they were concerned about a set of issues that are known to often be among financial concerns. These are identified in Table IV.22. The top five concerns expressed by the teachers relate to: whether they will have enough money for retirement, finding ways to supplement their income as a teacher, paying for their children's college education,

knowing whether they are using the best strategies for investing their money, and knowing whether they are taking advantage of tax laws that may benefit them. The concern about retirement savings mirrors findings of the 2008 Employee Benefit Research Institute (EBRI) Retirement Confidence Survey, which found that only 18 percent of respondents were confident they would have enough money in retirement, 43 percent only somewhat confident and 37 percent not confident or not at all confident they would have enough money in retirement. The findings of the present study also closely mirror those of the EBRI Retirement Confidence Survey in the area of investments. When asked whether they agreed with the statement that they and their spouse were knowledgeable about investments and investment strategies, 32 percent of Retirement Confidence Survey respondents disagreed. Results suggest that K-12 teachers share at least these two financial concerns with other US workers.

Table IV.22 – Teachers' Personal Financial Concerns

	N	Percent
Knowing whether I will have enough money for retirement	246	48.9
Determining ways to supplement my income as a teacher	205	40.8
Paying for my children's college/university education	198	39.4
Whether I am using the best strategies for investing my money	191	38.0
Whether I am taking advantage of all the tax laws that benefit me	179	35.6
Not having sufficient income to meet my needs	170	33.8
Whether I am making the best use of employer-sponsored savings or investment plans	139	27.6
My level of credit card debt	134	26.6
Understanding insurance options and costs during retirement (e.g. private insurance, employer-sponsored insurance, Medicare)	130	25.9
Developing an estate plan (e.g. wills, trusts, gifts)	129	25.7
Knowing which sources of financial information to trust	125	24.9
Understanding the role of social security in my likely retirement income	125	24.9
Covering the cost of my continuing education requirements	123	24.5
Paying of my college/university loans	115	22.9
Being able to develop and follow a realistic spending plan	106	21.1
Having funds to buy a home and meet my mortgage payments	106	21.1
Understanding and selecting long-term care insurance	96	19.1
Understanding and selecting personal/family health insurance coverage	78	15.5
Understanding and selecting the most appropriate life insurance option(s) for me and my family	69	13.7
Finding the best property and automobile insurance products to meet my needs	60	11.9
Whether I am getting the best rate when buying on credit	58	11.5

One interesting insight is that although the financial topic area of 'income and careers' was the area that teachers felt most competent to teach, income (not having sufficient income to meet needs and determining how to supplement one's income) ranked among the top financial concerns for teachers. The examples of topics included in the survey under 'income and careers' were 'Identify sources of personal income' and 'Describe factors affecting take-home pay.' One might speculate that the examples led teachers to think of the topic in overly simplistic ways; rather than calling to mind some of the challenges of financial education such as its value leadenness the fact that financial well-being is not wholly under the control of the individual.

Since we asked only about felt concerns and not actual financial status, it is not possible to draw conclusions about how well teachers' concerns align with actual financial behavior and/or objective indicators of financial well-being. Although few teachers expressed lack of understanding of basic financial issues and few expressed concerns about current spending issues (e.g., credit rates, auto insurance), it is noteworthy that income sufficiency is a top concern for a rather large proportion (one-third or more) of the overall teacher population.

Turning to a multivariate analysis of predictors of the key concerns, we find few strong predictors of teachers' financial concerns beyond those that would be expected at different life-cycle states. This suggests that K-12 teachers are fairly homogeneous regarding the financial issues that 'weigh' on their minds. As shown in Table IV. 23, married teachers were more than twice as likely to express concern about paying for their children's college education than were non-married teachers, a variable that most likely picks up who have children, since we did not ask about children. Race was also a significant predictor of this concern with nonwhite teachers nine percent more likely to express the concern than whites.

Table IV. 23 -
Likelihood of Responding "Yes" about Having Concern about Selected Financial Concerns

	Paying for Children's College Education			Supplementing One's Income as a Teacher			Knowing Whether Using the Best Strategies for Investing Money		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Years Exp	0.98	0.01	0.06	**0.97**	**0.01**	**0.00**	**1.02**	**0.01**	**0.04**
Gender	0.84	0.20	0.47	0.80	0.18	0.31	1.13	0.27	0.59
Race	**2.09**	**0.63**	**0.01**	1.12	0.34	0.70	0.92	0.26	0.78
Marital Status	**2.30**	**0.54**	**0.00**	0.87	0.19	0.54	1.11	0.25	0.64
Standards									
Testing	1.27	0.32	0.34	0.64	0.16	0.08	0.92	0.23	0.73
Contentonly	1.07	0.29	0.81	0.78	0.21	0.35	1.05	0.29	0.85
Had course	0.84	0.19	0.43	0.94	0.21	0.79	1.18	0.26	0.45
Only wkshp	0.78	0.26	0.46	1.24	0.40	0.51	1.20	0.40	0.58
Povertyrate	0.99	0.01	0.51	0.99	0.01	0.32	0.99	0.01	0.64
Discipline									
SpecialEd	0.69	0.26	0.33	**2.29**	**0.90**	**0.04**	1.40	0.54	0.38
Art/Music	0.78	0.42	0.65	1.22	0.59	0.68	2.36	1.20	0.09
English/LA	0.66	0.25	0.26	0.91	0.35	0.80	1.65	0.61	0.18
ForeignLan	0.44	0.21	0.09	0.76	0.38	0.59	0.87	0.48	0.81
Math	0.82	0.31	0.60	1.10	0.41	0.79	2.07	0.79	0.05
NaturalSci	0.58	0.25	0.20	0.86	0.37	0.73	1.79	0.77	0.18
SocialStud	0.84	0.36	0.69	0.76	0.33	0.53	1.40	0.62	0.44
Voc/Tech	0.91	0.38	0.82	1.30	0.55	0.53	1.40	0.61	0.44
Other	0.76	0.34	0.53	0.62	0.30	0.32	**2.70**	**1.21**	**0.03**

Two variables were identified as significant predictors of being concerned about supplementing one's income as a teacher (Table IV.23). These included years of teaching experience and being a special education teacher. Expression of concern about supplementing income decreased about three percent per year of teaching experience; perhaps not surprising given that as teachers gain teaching experience, they are more likely to have moved beyond earlier financial pressures such as paying college loans, establishing first-time home ownership and managing higher infant and preschool child care expenses. One surprising finding was that special education teachers were found to be significantly more likely than the comparison group of elementary education teachers to express concern about supplementing their income. It is possible that the special education category captured a greater number of individuals working in lower paid "teacher" categories such as teacher aide, though it is not possible to tell for sure using the data collected.

Two variables were found to be significant predictors of teachers' concern about whether they were using the best strategies for investing their money (Table IV. 23). These were years of teaching experience and teaching in an "other" teaching category, which included individuals in positions such as English as a Second Language, ROTC, health education, library science, or other. The likelihood of teachers expressing concerns about making wise investment choices increased about two percent with each additional year of teaching experience. This suggests that the topic likely becomes more salient to teachers as they near retirement age, although concern about sufficiency of retirement income did not vary significantly according to any of the variables examined. It is less clear why teaching in an "other" teaching category is associated with concern about investments. One possibility is that the positions serve as a proxy for either more advanced levels of education (and greater awareness of investment possibilities and pitfalls) and/or positions with less employment stability (and cognizance of need for additional attention to wealth building).

Interestingly, concern about having sufficient income for retirement did not differ significantly with any of the variables examined. What this means is that the concern crosses all sub-groups rather than that it is not a major issue for teachers. Concern about 'whether I will have enough money for retirement' was in fact, the top financial concern expressed by teachers; nearly half of all those who responded (Table IV.22).

Because there were so few significant predictors of teachers' personal financial concerns, it is probably fair to say that such concerns are more often randomly distributed across sub-groups of teachers than not. This lack of variation may be because teachers tend to hold relatively secure jobs with health insurance and pension coverage. They are concerned, but that is uniform across teacher categories.

Summary of Teacher Sample Results

Only slightly more than a third of teachers have ever had a college course in financial subject matter and even fewer have had some kind of pedagogical preparation related to financial education. Preparation for and the teaching of personal finance is concentrated in the vocational education and social studies teaching areas that have traditionally required courses in economics or consumer finance as part of the teacher education curriculum. It is also most frequently taught in math, which may benefit from the opportunity the subject provides to contextualize instruction. While a larger percentage of teachers agree with the statement that high school students should be required to take or be tested on personal finance for high school graduation, they are less likely to agree that it should be an important part of their own disciplinary teaching. Those who are likely to be most interested in participating in further education are those who have already had courses with this content and who teach in vocational areas. And although few (about 20 %) teachers say they would be 'very likely' to participate in continuing education on personal finance, three-fourths overall indicate they would at least 'perhaps' be willing to participate in continuing education on the subject.

It is not clear from our study whether the 'tepid' interest in further education is because teachers are already overwhelmed with teaching obligations, do not believe that their teaching assignments will be strengthened by personal finance components, or they just are not aware of available curriculum. Although personal finance standards and curriculum exist for even elementary grades (e.g., the Jump$tart standards are written for 4^{th}, 8^{th}, and 12^{th} grade), few in our sample felt capable of effectively using these standards. Nor state standards have an influence on personal finance course-taking or teaching behavior or perceived teaching competency.

Teachers reported feeling least competent to teach in the areas of risk management and insurance, saving and investing, financial responsibility and decision making and credit and debt, the areas of study that are considered necessary to change the credit and savings behavior that has motivated state mandates on financial literacy education. Teachers are not unaware of the importance of understanding in these areas as their own personal financial practices are, on average, more positive than those of US households, and they do consult and attend seminars given by financial specialists.

A clue to possible ways of integrating financial education into the K-12 curriculum is given by teachers of mathematics who are no more likely (than elementary grade teachers) to have taken for credit a course with personal finance content but are more likely to have taught a course that addresses the subject matter. Their higher expressed competency to teach lessons in savings and investment suggests that they use those examples to illustrate mathematical concepts. This would be an example of how teachers in our sample integrated personal finance concepts into existing courses, as was done by virtually all teachers who taught such courses. Interest in attending additional education sessions may be low because of a perception that the continuing education would not necessarily be targeted to their specific discipline and/or focus on the integration of lessons into existing courses.

Table IV-A- Variable Definitions

Variable	Definition
Teacher Characteristics	
Years Exp:	Years of Teaching Experience
Gender:	= 1 if Female; 0 if Male
Race:	= 1 if White; 2 if Nonwhite
Marital Status:	= 1 if Married or partnered; 0 if Else
Poverty Rate:	Poverty rate of school district in which teacher teaches
State Standards	
Content Only	=1, if State has content standards for K-12 students, but no testing (IA, NJ, PA, WI)
Testing:	= 1, if State has standard and testing for K-12 students (VA, GA)
	(Excluded category: no standards (CA and CO))
Teacher's education	
Had course:	=1 if took a course for credit with personal finance content
Onlyworkshop:	= 1 if took only a workshop with personal finance content

Teaching Discipline (variable = 1 if teaches in specific discipline)

specialed.
artandmusic.
englishlanguagearts.
foreignlanguages.
math.
naturalscience
socialstudies
vocational
other (ESL, health education, library science, ROTC, and the generic other category)

V. RESULTS: PRE-SERVICE TEACHER EDUCATION STUDENTS

Sample Characteristics

The findings regarding pre-service teacher education students' personal finance background and capacity to teach personal finance education are based on responses received from 627 individuals. This represents a usable response rate of 17.1 percent of all pre-service teacher education students enrolled at eight public universities selected for participation in the study. As shown in Table V.1, responses were received from all states contacted (participating universities were identified in Table III.1), however, it is apparent that teacher education student respondents from Wisconsin are over-represented. Although four follow-up reminders were sent to students in all states to boost responses, it may be that the higher response rate received from Wisconsin can be attributed to students' comfort with the idea that the project researchers were from their 'home'state and/or institution.

Table V.1 -
Distribution of Teacher Education Student Respondents
by Region and State

Western Region	N=91	14.5%
California	66	10.5
Colorado	25	4.0
Southeast Region	N=84	13.4%
Georgia	63	10.1
Virginia	21	3.3
Northeast Region	N=134	21.4%
New Jersey	91	14.5
Pennsylvania	43	6.9
Midwest Region	N=318	50.7%
Iowa	90	14.4
Wisconsin	228	36.4

Our sample is of students "currently enrolled in a teacher preparation program," the phrasing of a screener question for eligible respondents. Thus they are seeking a credential to teach or work in some capacity in K-12 education. This training comes, in some cases, many years later than for the teachers in our sample and, therefore, is more likely to be influenced by recent changes in the K-12 curriculum. Of course in this study we are most interested how the recent push for financial education in K-12 may have

influenced the training, attitudes and competencies of students who will soon be qualified as K-12 teachers. We would expect long-time teachers to have less formal training than current education students in areas on which states have more recently set standards. For this reason in this section we compare responses of the pre-service teacher education students with those of the K-12 teacher sample to assess whether formal training, attitudes and competencies have changed in response to changes in financial literacy standards.

Table V.2

Descriptive characteristics of Teacher Education Students: Compared to K-12 Teachers

	Teacher Ed Students	K-12 Teachers
% Female	85.1%	75.0%
Median Age	23	46
Race/Ethnicity		
White	85.7%	83.1%
Black	1.6	7.9
Hispanic	6.3	6.2
Other (Am In, Asian, Pacific Is)	6.4	2.7
Marital Status		
Married/Cohabiting	17.4%	73.1%
Never Married	81.4	15.2
Div/Widowed/Other	1.3	11.7
Highest Degree[a]		
Bachelor's	70.3%	43.1%
Master's/Spec	16.8	56.0
Doctorate	0.0	0.8
Other	1.5	0.2
Certification Only	11.4	

[a] Highest degree currently being pursued by teacher education students. Highest degree completed by K-12 Teachers.

Demographic Characteristics. Compared to the K-12 teachers' sample, the teacher education student respondents were similar in terms of racial background. However, there were slightly more females than in the teacher sample and, as would be expected in a largely undergraduate population, only a small percentage was married (Table V.2). The teacher education students were, not surprisingly, much younger than the teacher sample and most of them were pursuing a first undergraduate degree. The majority of the

teacher education student respondents had completed nearly all of their subject-matter coursework towards this degree, including their pre-student teaching practica (Table V.3). About two-thirds had completed required coursework in teaching methods and curriculum development but most had yet to complete student teaching.

Table V.3 - Teacher Education Requirements Completed

Requirements Completed	**Percent**
Nearly all subject matter coursework	89.8
Pre-student teaching practica	76.6
Methods & curriculum coursework	69.9
Student teaching	19.5

Teacher education student respondents represented a variety of teaching specialties (Table V.4) with 42 percent preparing to be elementary teachers and the remainder in specific disciplines at the K-12 level. Nationally, about 53 percent of teachers work at the elementary level (NCES, 2007) so the distribution in the present sample is consistent with this attribute of the US teacher population.[34] Given the disciplinary differences in the teaching of financial literacy that we found for K-12 teachers, we were pleased that sufficient numbers of students defined a disciplinary focus to allow us to examine differences in training and expectations across disciplines.

[34] Of our K-12 teacher sample, 21.3 percent taught at the Pre-K-5th grade level and another 31 percent 6th-8th grade.

Table V.4 - Teacher Education Students' Disciplinary Specialty		
Teaching Assignment	**N**	**Percent**
Elementary Education	258	42.0%
Special Education	36	5.9%
Art & Music	22	3.6%
English / Language Arts	42	6.9%
ESL	2	0.0%
Foreign Language	39	6.4%
Health Education	3	0.0%
Mathematics	43	7.1%
Natural Science	54	8.9%
Social Sciences	65	10.7%
Voc / Tech Education	25	4.1%
Other	20	3.3%

Teaching Personal Finance: Teacher Preparation and Experience

Own Preparation in Personal Finance. We asked student respondents about courses with personal finance content they had taken both in college and high school, since state financial literacy standards may have increased the probabilities that they had had such a course prior to college entry. We also asked these students, as we did K-12 teachers, about their own financial planning experience. In this chapter we describe some of that experience as part of their teacher preparation since this may indicate particular interest in the teaching of financial issues.[35]

Only about 20 percent of the teacher education students had taken a course dealing with financial education in high school and less than one third had taken any financial education-related course for credit as part of their college coursework (Table V.5). The percentage having had a high school course is slightly higher than the 17 percent figure reported for all high school students by the Jump$tart Coalition (2006). The percentage doing college course work is comparable to the percentage of K-12 teachers who had had such course work, suggesting no change in emphasis in teachers' training on personal finance content. Indeed, it appears that there may be less emphasis in teacher training programs on courses with this specific focus—consumer economics or consumer

[35] We report financial experience separate from teachers training for K-12 teachers since one would expect employed individuals, covered by benefit plans, to consult human resource specialists or attend financial planning workshops and to consider these apart from their educational obligations. We asked those experiences about the K-12 teachers currently, not during their training years.

education—although the differences in distribution of these two samples across states and the small numbers who have actually taken these courses means this observation is presented with some caution.

As with K-12 teachers, the college course most frequently cited by teacher education students as one that had financial literacy content was economics. The next most frequently cited course title among both groups was consumer economics or consumer education. Only a handful of teacher education students reported having taken a course dealing with methods of teaching personal finance.

Table V.5 - Teacher Education Students' Financial Education Background
(percent reporting)

Had Course or Financial Planning Experience	**Teacher Ed Students**	**K-12 Teachers**
Had a financial education course in high school	19.9	?
Took a college course for credit: [a]		
• Any financial education course	30.8	37.0
• Economics (macro/micro)	26.0	26.8
• Consumer econ/ed	12.6	20.1
• Personal/Family Econ/Mgt	5.6	16.5
• Personal finance topic specific	2.6	11.3
• Methods of Teaching Personal Finance	0.3	2.6
Education through own financial planning[a]		
• Consulted a professional financial planner	11.8	50.4
• Consulted a benefits specialist at place of employment	5.6	33.8
• Attended a workplace presentation on financial literacy	9.4	23.3

[a.] Multiple responses allowed

Not surprisingly, teacher education students were much less likely than K-12 teachers to have consulted a financial planner, a benefits specialist at work, or attended a workplace presentation on financial literacy. It is interesting, however, that nearly 12 percent of teacher education students did report having consulted a professional financial planner, suggesting there is some important variation in finance-related experience and interest within the teacher education student population. Later we describe these students' actual

financial practices, which are surprisingly comparable in many ways to that of the older K-12 teacher sample.

Own Teaching Experience. It is no surprise that few students have had teaching experience specifically related to personal finance education, although the percentage is very low indeed. Only 7.6 percent said they had developed lessons or curriculum related to financial literacy and only 5.4 percent reported having taught financial literacy lessons during their practicum or student teaching experiences. Fewer still said they had planned a community-based financial literacy program (2%) or taught financial literacy to a community-based group (1.4%). The percentage of teacher education students that said they had taught financial education is far lower than the percentage of practicing teachers reporting this experience (29.7%). Since only about 20 percent of the student sample had completed student teaching, it is possible that the number of students actually getting financial education teaching experience prior to graduation is somewhat larger than these reported figures. However, given that many states have no specific certification requirements for K-12 personal finance teachers, it is also quite likely that substantial numbers of financial education teachers are acquiring both the responsibility and preparation to teach in this area 'on the fly.'

Teacher Education Students' Opinions on Personal Finance Education

As were practicing teachers, pre-service students were asked their opinions on a number of topics related to financial education.

Educational Requirements. As shown in Table V.6, the students were divided in their opinion about whether financial education was too complicated for elementary school children with slightly more than half agreeing it was. When asked at what grade level financial education should be offered, pre-service teachers mirror practicing teachers in their view that financial education is a subject that is appropriate for older students. While virtually all the student respondents (88%) think financial education is appropriately taught in grades 9-12, only 12 percent think it is appropriate for preschool through grade 2 and only about one-third think it is appropriate for other elementary grades (3-5). It is difficult to discern whether it is that younger children are seen as too young to comprehend financial concepts and/or that the subject matter itself is seen as inappropriate for those at younger ages. But given that very few pre-service or in-service teachers have taken financial education methods courses or workshops, and that much of teachers' content-focused financial education has taken place primarily through their own financial planning (which would be complex and adult-focused), it is likely that students have not been exposed to the concept of personal financial literacy as a developmental process or to developmentally appropriate curricula and teaching/learning resources. Since about half the student sample is preparing to teach at the elementary level, the high percentage that sees personal finance as 'not a subject for young children' is a potential challenge to the introduction of personal finance curriculum at the lower grade levels.

Although not viewing financial education as universally appropriate across grades, respondents are supportive of financial literacy requirements. Over 85 percent of the pre-

service students agreed with the statement that students should be required to take a financial literacy course or pass a financial literacy test for high school graduation. In general, the opinions of the teacher education students and practicing teachers are quite similar (Table V.6). However, the students do appear to be slightly less convinced that financial education should be required for high school graduation than are K-12 teachers.[36]

Table V.6 - Teacher Education Students' Opinions about Financial Education

Survey statement	Teacher Education Students			K-12 Teacher
	Strongly Disagree	Moderately Agree	Strongly Agree	Strongly Agree
It is too complicated for elementary school children	44.1%	49.3%	5.9%	8.5%
Students should be required to take a FL course or pass a test for HS graduation	14.0%	46.7%	39.3%	46.2%

When asked about the extent to which they thought financial education should be incorporated into their teaching discipline, the pre-service students responded similarly to the practicing teachers with very few saying they thought it should be a major part of what they were going to teach (Table V.7). Somewhat more students than practicing teachers also said they thought it was not at all important to incorporate in their subject matter area. The pre-service teachers' opinions about how important it was for teachers in their area to be prepared to teach financial education followed this same pattern with slightly more of the K-12 teachers than students saying it was both very and not at all important for them to be prepared to teach the subject. It may be that teachers are a bit more 'opinionated' about the relevance of financial education to their subject area than are teacher education students. Nevertheless, a large majority of both groups did indicate that they felt financial education should be incorporated into their subject matter area at least to a limited degree. This suggests that both groups of teachers may well be open to learning more about how to teach financial literacy across the curriculum as opposed to viewing it as something that should be offered solely as a stand-alone course.

[36] We caution that this difference may be affected by the heavier weighting of Wisconsin students in the student sample. Wisconsin does not have testing requirements. It does have voluntary standards which may make standards and voluntary teaching of the material more familiar to sampled students.

Table IV.7 – Perceived Relevance of Financial Education in Own Subject-Matter Area: Teacher Education Students and K-12 Teachers

	Not at All	Limited Degree/ Somewhat	Major Part/ Very
Should FL be incorporated in your subject matter area?			
Students	13.9%	77.3%	8.9%
K-12 Teachers	20.5	69.6	10.1
How important is it for teachers in your area to be prepared to teach FL?			
Students	19.7%	63.0%	17.4%
K-12 Teachers	24.4	50.7	24.9

Perceived Competency to Teach Personal Finance Topics. When asked about their perceived competency to teach financial topics, we observe the same pattern of differences across these areas for students as for K-12 teachers (Table V.8). Both teacher education students and K-12 teachers felt least competent to teach about risk management and insurance and about savings and investment. These are arguably the more technical of the topic areas. Two-thirds of the students indicated they were "not very competent" to teach about risk management and insurance, and about half "not very competent" in the areas of credit and debt and saving and investment. Both groups expressed quite similar levels of competency to teach in the areas of financial responsibility and decision making and planning and money management, which is somewhat surprising given the students' relative lack of experience in these matters.

Table V.8 – Teacher Education Students' Perceived Competency to Teach Financial Topics: Compared with K-12 Teachers

	Teacher Education Students			**K-12 Teachers**
Financial Topics	**Not Very**	**Adequately**	**Very**	
Planning and Money Management	28.3%	53.6%	18.1%	31.6%
Income and Careers	36.2	51.4	13.0	26.6
Financial Responsibility and Decision Making	36.8	51.3	12.0	40.8
Saving and Investment	50.1	43.3	6.6	46.4
Credit and Debt	50.2	36.3	13.6	33.3
Risk Management & Insurance	67.4	29.2	3.4	52.7

Multivariate logistic regression analyses suggest some interesting relationships between felt competency and characteristics of teacher education students. We identified students by two broad age groups and marital status to distinguish the effects of being older than the traditional college student and perhaps more experienced with personal finance issues. We included a variable indicating whether the student had taken a high school course in financial education as well as one that indicated having had a finance-related course in college. Hypothesizing that state financial literacy standards for K-12 education may have influenced the training of students currently in teacher education programs, we included a variable that indicated whether the state had standards related to K-12 financial literacy.

Table V.9 presents logit regressions of whether respondents stated they felt "not very competent" to teach in the six financial literacy topic areas identified earlier. Two characteristics of teacher education students were particularly important predictors of their perceived competency to teach financial topics: whether they had taken a financial literacy course in high school and whether they were married. Students who had taken a high school course were less likely—between 40 and 60 percent as likely—to report feeling not very competent to teach about all but one topic area, that exception being risk management and insurance. Students who were married were less likely to report feeling not very competent to teach in all areas but income and careers. Gender was a significant predictor of perceived competency in only one topic area, with females being more likely than males to report feeling not very competent to teach about credit and debt.

Disciplinary area in which the student was preparing to teach was not statistically significant in any consistent way. Those preparing in early childhood education were more likely to report feeling not competent (compared to the reference group of elementary teachers) to teach about financial responsibility. In contrast to the K-12 teachers' results (see Table IV.15), students in the vocational disciplines and social studies, the traditional areas for personal finance education, were not less likely to express lack of competence to teach in these areas. We cannot tell if this is because teachers in these disciplines gain competence through teaching rather than through teacher training or because of other differences between the groups such as changed teacher education requirements or opportunities. Whether the state in which the college was located had K-12 financial education standards had no predictive effect.

Table V.9 – Teacher Education Students' Perceived Lack of Competency to Teach Personal Finance Topics: By Area of Competency (1= not very competent; 0=else)[37]

Variable	Financial Responsibility			Income and Careers			Planning and Money Management		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Age 25+	1.15	0.32	0.61	0.95	0.27	0.85	1.48	0.43	0.18
Had HS Course	**0.41**	**0.10**	**0.00**	**0.57**	**0.13**	**0.02**	**0.59**	**0.15**	**0.04**
Had College Course	1.06	0.22	0.76	0.72	0.15	0.11	0.95	0.21	0.82
Gender	1.04	0.28	0.89	1.36	0.37	0.25	0.81	0.23	0.46
Race	0.83	0.22	0.48	1.09	0.30	0.75	1.02	0.29	0.94
Marital Status	**0.56**	**0.16**	**0.04**	0.64	0.18	0.11	**0.48**	**0.14**	**0.01**
State Standards	1.38	0.33	0.18	1.33	0.32	0.23	1.29	0.33	0.31
Discipline									
Earlychild~d	**2.09**	**0.75**	**0.04**	1.59	0.56	0.19	1.90	0.71	0.09
SpecialEd	0.99	0.41	0.98	1.05	0.41	0.90	0.90	0.38	0.80
ArtandMusic	1.55	0.78	0.38	1.41	0.69	0.49	0.95	0.53	0.93
Englangarts	1.68	0.58	0.13	1.38	0.49	0.36	1.71	0.61	0.13
ForeignLang	2.01	0.74	0.06	1.54	0.58	0.25	1.71	0.66	0.17
Math	0.96	0.36	0.92	0.75	0.28	0.45	0.42	0.20	0.07
Science	1.56	0.53	0.19	1.81	0.63	0.09	**1.93**	**0.65**	**0.05**
SocialStudies	**2.20**	**0.71**	**0.01**	1.29	0.41	0.42	1.19	0.40	0.60
Vocational	0.37	0.24	0.12	0.42	0.28	0.20	1.02	0.58	0.97
Other	1.41	0.66	0.46	1.27	0.59	0.60	0.64	0.36	0.44

Variable	Credit and Debt			Risk Management and Insurance			Savings and Investment		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Age 25+	0.86	0.23	0.57	0.60	0.17	0.07	1.45	0.39	0.16
Had HS Course	**0.52**	**0.12**	**0.00**	0.77	0.18	0.26	**0.64**	**0.14**	**0.05**
Had College Course	1.13	0.23	0.55	0.84	0.19	0.44	0.77	0.15	0.19
Gender	**1.67**	**0.42**	**0.04**	1.18	0.30	0.53	1.45	0.37	0.15
Race	0.99	0.27	0.97	0.64	0.19	0.14	0.93	0.24	0.79
Marital Status	**0.39**	**0.10**	**0.00**	**0.53**	**0.14**	**0.02**	**0.60**	**0.16**	**0.05**
State Standards	1.14	0.27	0.56	1.52	0.36	0.08	1.44	0.33	0.11
Discipline									
Earlychild~d	1.65	0.61	0.17	2.00	0.92	0.13	1.03	0.36	0.94
SpecialEd	0.66	0.27	0.31	0.62	0.26	0.26	0.68	0.26	0.32
ArtandMusic	1.54	0.80	0.41	0.52	0.26	0.19	0.84	0.42	0.72
Englangarts	1.18	0.40	0.62	1.06	0.40	0.88	1.26	0.43	0.50
ForeignLang	1.08	0.43	0.84	1.67	0.75	0.26	1.39	0.52	0.38
Math	0.64	0.23	0.21	0.74	0.29	0.43	0.63	0.23	0.20
Science	0.90	0.30	0.75	0.81	0.28	0.54	1.30	0.43	0.44
SocialStudies	0.75	0.23	0.36	0.87	0.29	0.68	0.95	0.29	0.86
Vocational	0.54	0.28	0.24	0.58	0.29	0.27	0.70	0.36	0.48
Other	0.54	0.25	0.18	0.45	0.20	0.08	0.48	0.22	0.10

[37] Variable definitions and values are displayed in Table V.A.

Curriculum Development and Additional Training

Knowledge of personal finance curriculum standards. Pre-service students were also asked to assess their qualification in pedagogical domains related to the teaching of personal finance. Over 90 percent of these future teachers said they were either not well qualified to use or were not familiar with the Jump$tart curriculum standards for personal finance education (Table V.10). About 85 percent of the pre-service students also said they were either not well prepared or not familiar with their state standards for financial education. These figures are similar to those for K-12 teachers, of whom 71 percent said they were not well qualified to use the Jump$tart standards and about 64 percent said they weren't qualified to use their state standards (Table IV.16).

Table V.10 – Pre-service Teachers' Perceived Qualification to Use Personal Finance Education Standards in Designing Curriculum

Type of Standard	Not Well Qualified	Adequately Qualified	Very Well Qualified	Not Familiar With
Jump$tart Standards	66.6%	7.9%	.9%	24.6%
State Standards	61.5%	15.2%	1.2%	22.1%

Perceived ability to design curricula. Teacher education students did report feeling somewhat better qualified in the other financial education-related pedagogical domains about which they were asked, although about half still reported feeling not well qualified in most areas. Table V.11 shows that over half of students reported feeling not well qualified to integrate financial literacy concepts into their discipline(s) and employ instructional strategies such as developing examples to explain financial literacy concepts and modify financial education methods and content for diverse learners. Over half also reported feeling not well qualified to assess students' financial literacy understanding and assess the degree to which instruction impacts students' financial behavior. Of the areas of pedagogical expertise addressed in the study, the teacher education students felt most qualified to use on-line learning resources and determine how social/cultural background relates to financial literacy understanding. Interestingly, these were the two pedagogical areas with the largest differences in the percentage of pre-service and in-service teachers responding they felt not well qualified (see Table IV.17). In both cases, fewer pre-service than in-service teachers said they felt not well qualified. The difference between practicing and pre-service teachers (respectively) who reported feeling not well qualified to use on-line financial literacy learning resources was 55.9 percent compared to 45.7 percent and the difference for reportedly feeling not well qualified to determine how

social/cultural background relates to financial understanding was 54.3 percent compared to 42.7 percent.

Table V.11 – Pre-service Teachers' Perceived Qualification in Other Pedagogical Domains (row percentages=100)

Pedagogical Domain	Not Well	Adequately	Very Well
Design Curriculum and Resources			
Integrate FL concepts in your discipline(s)	53.7	41.8	4.5
Use on-line FL learning resources	45.7	46.7	7.6
Employ Instructional Strategies			
Modify FL methods and content for diverse learners	56.6	37.1	6.4
Develop examples to explain FL Concepts	58.0	36.2	5.9
Address Learner Needs			
Assess students' FL understanding	53.9	40.6	5.5
Determine how social/cultural back-ground relates to FL understanding	42.7	49.1	8.3
Assess degree to which instruction affects students' financial behaviors	51.4	42.5	6.1

Recognizing the increasing diversity of the US student population (NCES, 2007b), the relation between culturally responsive teaching and academic achievement (e.g., Ladson-Billings, 1997, 2001), and the rapid expansion of students' use of web-based resources (see Palfrey & Gasser, 2008 for one of the most recent discussions), teacher education programs are now giving more attention to these aspects of pedagogy, both in general foundation and disciplinary-specific courses, than they did in past years. There is widespread agreement that much more needs to be done to address all of the issues and possibilities in these areas, however. The fact that such large proportions of pre-service and in-service teachers report feeling not well qualified to apply such pedagogies to the teaching of financial literacy bears this out.

Questions asked about curriculum development do provide some guidance on how supportive these students would be of collaboration with groups that might be able to assist in program development and conduct. Table V.12 indicates that students are more open to collaborating with the local financial services industry, involving parents in financial literacy classes, and team teaching financial literacy offerings than are K-12 teachers. We do not know whether this is because students accurately perceive their greater lack of competency to teach in these areas, if they have greater experience in their

own training with collaborative work and see it more favorably, or if they have less experience and therefore are less able to critically assess the value of this collaboration.

Table V.12 – Teacher Education Students' Opinions about Teaching Collaboration

Survey statement	Teacher Education Students			K-12 Teacher
	Strongly Disagree	Moderately Agree	Strongly Agree	Strongly Agree
FL concepts and courses are most effective if the teacher collaborates with local financial services	8.2%	62.0%	29.9%	30.5%
I'd encourage parents to be involved in FL classes if/when I taught them	8.0%	45.3%	46.7%	35.9%
I'd be open to team teaching FL	8.3%	35.0%	56.7%	37.7%

Note: FL: Financial Literacy

Willingness to Participate in In-Service on Teaching Personal Finance. One further question did, in fact, yield information indicating that both groups of teachers would be open to further education about teaching financial education. As shown in Table V.13, three-fourths of practicing teachers and two-thirds of teacher education students said they would be at least 'somewhat likely' to attend additional education (beyond what is required in their program) on teaching financial education. Twice as many K-12 teachers as pre-service students said they would be 'very likely' to do so, however. Since the timing of such education was not addressed specifically in the question, it is possible the students were thinking of the likelihood of this education within the context of their present, rather than future, teacher professional development.

Table V.13 – Openness to Attending Further Education about Teaching Personal Finance: Teacher Education Students and K-12 Teachers

	Not Likely	Somewhat Likely	Very Likely
Education Students	31.7%	56.4%	11.9%
K-12 Teachers	26.2%	51.7%	22.2%

When we examined the predictors of attendance, an interesting contrast with the findings about cross-disciplinary levels of teaching competence appears. Table V.14 shows that students with backgrounds in social studies were nearly three times as likely as the reference group of elementary school teachers to say they were 'very likely' to attend such further education on teaching personal finance and those with backgrounds in vocational education were nearly six times as likely to say so. This is consistent with these disciplines being traditionally responsible for teaching personal finance related topics. These respondents, who, as students feel no greater competence to teach personal finance, are perhaps aware that they need more training in this area. Note that, controlling for these characteristics, students in states with K-12 teacher standards are no more likely to be willing to participate in in-service than students in states without those standards. We note, again, however the small number of states in our sample which reduces the variance in this measure.

Table V.14 - Predictors of Students' Willingness to Participate in In-service Related to Financial Education
(1= very likely, 0=else)

Variable	Odds Ratio	Std. Err.	P>|z|
Age 25+	**2.04**	**0.75**	**0.05**
Had HS Course	1.03	0.37	0.94
Had College Course	0.85	0.29	0.63
Gender	1.75	0.76	0.20
Race	0.53	0.20	0.09
Marital Status	1.19	0.43	0.64
State Standards	1.31	0.50	0.47
Discipline			
Earlychild~d	1.24	0.69	0.70
SpecialEd	0.83	0.54	0.77
ArtandMusic	1.38	1.12	0.69
Englangarts	1.27	0.70	0.66
ForeignLang	1.02	0.62	0.97
Math	0.63	0.48	0.55
Science	0.87	0.50	0.80
SocialStudies	**2.77**	**1.20**	**0.02**
Vocational	**5.84**	**3.41**	**0.00**
Other	0.42	0.45	0.41

In addition, the likelihood of participating in further education about teaching financial literacy was twice as great for the teacher education students over 25 than those under age 25. Given that somewhat larger proportions of K-12 teachers support financial

education at all grade levels and that twice as many K-12 teachers as pre-service students indicate they would be 'very likely' to attend further education about teaching it, we speculate that appreciation of the need for financial literacy, and specialized preparation to teach it, may become more apparent to teacher education students as they become older (with more personal financial independence) and gain more actual teaching experience.

Education Students' Personal Financial Experiences and Concerns

Students' Financial Experiences. The variation that was seen in the personal finance experiences (courses and financial planning) of teacher education students can also be seen in their responses to other questions about their personal finance-related background. Table V.15 reports on specific ways in which individuals interact with the financial system and shows that nearly half of the teacher education students said they often or always set goals for their financial future and that nearly 40 percent have developed a financial recordkeeping system. Nearly one-fourth have purchased stocks and/or bonds outside of a retirement account. Not surprisingly, all of the financial

Table V.15 – Teacher Education Students' Personal Financial Experiences: Compared to K-12 Teachers

Percent who have ever:	**Education Students**	**K-12 Teachers**
Often/always planned and set goals for your financial future	48.5%	70.0%
Developed a financial recordkeeping system	39.5%	54.2%
Applied for a bank or credit union loan other than a mortgage	26.9%	72.9%
Purchased stocks, bonds outside retirement accounts	23.8%	54.5%
Contributed to another retirement plan (e.g., IRA)	14.2%	71.0%
Contributed to a voluntary employer-sponsored retirement account	13.4%	73.4%
Purchased real estate property for personal use	9.0%	83.4%
Taken out a mortgage	8.1%	82.7%
Refinanced a mortgage or home loan	4.8%	65.4%
Created a will or estate plan	4.1%	34.8%

experiences reported by teacher education students are at rates far below those for K-12 teachers. The biggest gaps in percentages reporting various experiences are in behaviors that would not be expected unless or until one is gainfully employed for a reasonable length of time; for example, purchased real estate property, taken out a mortgage, and contributed to a voluntary employer-sponsored retirement account.

Part of the survey asked teacher education students to indicate whether they had engaged in a number of financial practices known to be associated with financial security (Hilgert & Hogarth, & Beverly, 2003) during the past year, all practices that are reasonable to adhere to at their younger ages. Compared to K-12 teachers and US households (Hilgert, Hogarth, & Beverly, 2003), larger percentages of teacher education students reported paying all bills on time and paying credit card balances in full each month (Table V.16). This may be because the majority of teacher education students are single, with few financial responsibilities, with some still receiving financial support from parents/family. The students' financial behavior mirrors that of US households more closely in savings behavior and reading about money management. They are much less likely than either teachers or US households to review their credit report, maintain a fund for unexpected expenses (again, they are probably relying on parents or financially constrained by educational expenses), reconcile their checkbook, use a written spending plan, and calculate net worth.

Table V.16 – Percent Reporting Recommended Financial Practices: Teacher Education Students, K-12 Teachers and US Households

Financial Practices	**Education Students**	**K-12 Teachers**	**US Households**
Usually paid all bills on time	93.9%	92.6%	88%
Reviewed credit report	36.6	74.3	58
Maintained a fund for unexpected expenses	48.5	70.6	63
Read about money management	23.0	53.8	20
Prepared own personal income tax	32.0	49.1	40
Reconciled checkbook every month	38.3	57.2	75
Usually paid credit card balances in full each month	70.4	54.1	61
Used a written spending plan	29.1	38.0	46
Calculated net worth	12.7	37.8	40

Students' Personal Financial Concerns. When asked about their own personal financial concerns, those reported by the largest percentage of students related to income adequacy; determining ways to supplement their income as a teacher, having sufficient income to meet needs including income needed to buy a home, pay off college loans, and cover the cost of continuing education requirements (Table V.17).[38] Concern about paying off college loans is certainly warranted for all college students, but perhaps even more for at least some teacher education students. As discussed in the literature review, recent research (e.g., Block, 2006) has indicated that rising college costs make it likely that up to one-fourth of public university graduates will not be able to repay their college loans on a beginning teachers' salary. Regarding the cost of college, paying for their children's college education ranked moderately high among the list of concerns expressed by the teacher education students (and similar to percentages of K-12 teachers expressing the concern) although only about 7 percent of the students reported having children themselves. This may be because they are so close to understanding the cost of college themselves.

Table V.17 – Teacher Education Students' Personal Financial Concerns
(percent reporting)

Concerns	**Education-Students**	**K-12 Teachers**
Determining ways to supplement my income as a teacher	59.3%	40.8%
Not having sufficient income to meet my needs	56.8	33.8
Having funds to buy a home or meet my mortgage payments	54.4	21.1
Paying off my college/university loans	53.6	22.9
Covering the cost of my continuing education requirements	46.6	24.5
Whether I am using the best strategies for investing my money	46.4	38.0
Knowing whether I will have enough money for retirement	44.1	48.9
Understanding and selecting personal/family health insurance coverage	43.1	15.5
Being able to develop and follow a realistic spending plan	42.6	21.1
Paying for my children's college/university education	37.3	39.4
Knowing which sources of financial information to trust	35.7	24.9
Whether I am taking advantage of all the tax laws that may benefit me	34.8	35.6
Finding the best property and automobile insurance products to meet my needs	33.0	11.9
Understanding the role of social security in my likely retirement income	30.6	24.9
Understanding and selecting long-term care insurance	29.4	19.1
Understanding and selecting the most appropriate life insurance option(s) for me and my family	25.4	13.7

[38] The respondents were asked "Which of these are major sources of worry or concern?" and could check as many as were applicable.

Understanding insurance options and costs during retirement	24.9	25.8
Developing an estate plan	20.6	25.7
My level of credit card debt	19.6	26.6
Whether I am making the best use of employer-sponsored savings or investment plans	19.0	27.6
Whether I am getting the best rate when buying on credit	16.8	11.5

Substantial numbers of the students reported being concerned about developing and following a realistic spending plan. In college, many students have their spending plans determined by others (e.g., parents and/or student financial aid offices) and don't have much experience in managing money independently. This lack of experience, in addition to limited present income and uncertainty about future income as a teacher may be important contributors to the high rates of concern expressed about income adequacy.

Several other findings related to teacher education student financial concerns warrant comment. One is the relatively low numbers of college students that expressed concern about the level of their credit card debt and whether they were getting the best rate when buying on credit. Although the present study did not ask student respondents about their actual debt levels, recent research indicates that the typical college student graduates with over $3000 in credit card debt in addition to outstanding student loans (Draut & Silva, 2004). Research has further indicated that teacher education students in general come from lower socioeconomic backgrounds than other college students, making them potentially more likely to assume credit card debt to meet expenses (Zumwalt & Craig, 2005). Of course a respondent may have not been concerned about a large credit card debt. At the same time, a majority of the sample of students reported usually paying their bills on time and making full credit card payments. Either teacher education students in the present study are carrying much less credit card debt than is the typical college student, are much more knowledgeable about credit than the average college student, or are 'blissfully' unaware of the variations (and pitfalls) associated with the revolving credit industry. The high percentage in this sample who said they pay off their credit card balance each month also suggests that Education students (or those who help them with their finances) may be more careful money managers than most.

Also noteworthy is the difference in percentages of pre-service and K-12 teachers expressing various financial concerns. Teacher education students are much more likely than practicing teachers to be concerned about income adequacy, developing a realistic spending plan, and selecting appropriate health, life, property and automobile insurance. Such issues are typically handled by others for a majority of undergraduate students so the concerns expressed probably reflect awareness of the transition to financial independence that is imminent for many of them. The percentage of pre-service and K-12 teachers who expressed concern about retirement-related issues (e.g., knowing whether I will have enough money for retirement and understanding insurance options and costs during retirement) was surprisingly similar; this finding suggests students are

future oriented and would welcome assistance in addressing personal financial issues using long-term as well as short term planning horizons.

Table V.17 – Teacher Education Students' Personal Financial Concerns (percent reporting)

Concerns	**Education Students**	**K-12 Teachers**
Determining ways to supplement my income as a teacher	59.3%	40.8%
Not having sufficient income to meet my needs	56.8	33.8
Having funds to buy a home or meet my mortgage payments	54.4	21.1
Paying off my college/university loans	53.6	22.9
Covering the cost of my continuing education requirements	46.6	24.5
Whether I am using the best strategies for investing my money	46.4	38.0
Knowing whether I will have enough money for retirement	44.1	48.9
Understanding and selecting personal/family health insurance coverage	43.1	15.5
Being able to develop and follow a realistic spending plan	42.6	21.1
Paying for my children's college/university education	37.3	39.4
Knowing which sources of financial information to trust	35.7	24.9
Whether I am taking advantage of all the tax laws that may benefit me	34.8	35.6
Finding the best property and automobile insurance products to meet my needs	33.0	11.9
Understanding the role of social security in my likely retirement income	30.6	24.9
Understanding and selecting long-term care insurance	29.4	19.1
Understanding and selecting the most appropriate life insurance option(s) for me and my family	25.4	13.7
Understanding insurance options and costs during retirement	24.9	25.8
Developing an estate plan	20.6	25.7
My level of credit card debt	19.6	26.6
Whether I am making the best use of employer-sponsored savings or investment plans	19.0	27.6
Whether I am getting the best rate when buying on credit	16.8	11.5

We ran logistic regressions to identify significant predictors of teacher education students' concerns related to personal finance matters. Overall, few variables were identified as strong predictors of students' concerns, suggesting they are more similar than different within the population. This is consistent in a population with a shared and immediate concern about the financing and completion of college education. Marital status, which would also include the effect of being older and married (our age variable did not differentiate students older than 25 by age) was a significant predictor of three of

the top concerns: determining ways to supplement income as a teacher, having sufficient income to meet needs, and covering the cost of continuing education requirements. In each case, students who were single were about half as likely to express this as a concern compared to married students (see Table V.18). Race was also a significant predictor of three top concerns. These included covering the cost of continuing education requirements, knowing whether the respondent was taking advantage of all the tax laws that may be of benefit, and knowing whether the respondent was using the best strategies for investing money. In all cases, white students were about half as likely as nonwhites to indicate these as concerns. Disciplinary distinctions are not consistent across concerns and may be due to the selection of students who chose to respond to the survey.

Summary of Education Students Results

The students in our sample were almost all working on a bachelor's degree and near completion of their required course work. Thus, answers about having taken a course with personal finance content reflect the requirements of their educational program. Although there are differences in the distribution across states of the K-12 and student samples which may affect the comparative results, current students are no more likely to have taken a course with personal finance content in college than have current K-12 teachers who have completed their degrees, some many years earlier. There is no evidence in these data that teacher education programs are training students with greater personal finance knowledge. Most interesting is that students in the disciplines that have traditionally taken courses with personal finance content, because they are expected to teach those courses, feel no more confident about teaching that material than do students training to teach in the other disciplines.

There is some evidence that students, though only 19 percent in our sample, who have had a high school personal finance course feel more confident about teaching this content. Note that we have no measures of actual capacity to teach and so these students may just be more familiar with the *content* of personal finance courses and are more confident they can teach the same material. They may also be selective of students who have always had a particular interest in personal finance issues and would have had greater felt competence even without a high school course. It is interesting that these students on average are less supportive of HS testing than the K-12 teachers, though they are open to additional workshops and collaborating with other groups in developing and teaching courses. The opinions of the pre-service students on this topic may mirror those of the teacher education faculty which we discuss in the next section.

The openness to additional course work may reflect these students' relatively good financial habits as well as their interest in gaining additional teaching knowledge and skills. Though they express concerns about certain aspects of their future economic security, they are more likely to pay bills on time, including their credit card, than either the K-12 sample or US households do on average. Those going into teaching careers may be more security minded individuals attracted by a career and benefits that will allow them to maintain a secure, if not luxurious, standard of living.

Table V. 18

Likelihood of Responding "Yes" about Having Concern about Selected Financial Concerns: Teacher Education Students

	Having Sufficient Income to Meet My Needs			Covering the Cost of Continuing Education Req.			Determining Ways to Supplement my Income as a Teacher		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Age 25+	1.13	0.29	0.62	1.19	0.30	0.50	0.92	0.25	0.77
Had Course									
In HS	1.04	0.23	0.87	1.08	0.23	0.72	0.95	0.21	0.80
In College	1.29	0.25	0.20	0.86	0.17	0.45	1.01	0.20	0.95
Gender	1.23	0.30	0.41	1.22	0.30	0.42	1.45	0.37	0.15
Race	0.73	0.19	0.24	**0.40**	**0.11**	**0.00**	0.73	0.20	0.24
Marital Status	**0.51**	**0.12**	**0.01**	**0.62**	**0.15**	**0.05**	**0.52**	**0.13**	**0.01**
State K-12 standard	0.98	0.22	0.92	1.36	0.31	0.17	0.88	0.21	0.59
Discipline									
ErlyChildhd	1.13	0.38	0.73	1.13	0.39	0.73	0.57	0.19	0.09
SpecialEd	1.15	0.44	0.72	1.36	0.53	0.43	0.73	0.29	0.43
Art&Music	0.49	0.23	0.13	0.64	0.31	0.35	0.88	0.40	0.78
EnglishLang	1.18	0.41	0.63	1.48	0.52	0.26	**2.73**	**1.15**	**0.02**
ForeignLang	**2.30**	**0.91**	**0.04**	**2.73**	**1.02**	**0.01**	2.06	0.86	0.08
Math	0.73	0.26	0.38	0.72	0.26	0.36	1.06	0.37	0.87
Sciences	1.39	0.44	0.30	0.93	0.31	0.83	0.82	0.27	0.56
SocialStudies	0.77	0.24	0.39	0.91	0.27	0.75	0.67	0.21	0.20
Vocational	1.15	0.54	0.76	1.65	0.79	0.30	**0.36**	**0.18**	**0.04**
Other	1.70	0.79	0.26	1.50	0.66	0.36	2.07	1.01	0.14

	Whether I am Taking Advantage of Tax Laws			Using the Best Strategies for Investing my Money			Paying for my Children's College Education		
	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|	Odds Ratio	Std. Err.	P>|z|
Age 25+	1.05	0.28	0.85	0.64	0.16	0.08	1.63	0.42	0.06
Had Course									
In HS	1.49	0.33	0.08	1.11	0.24	0.63	1.08	0.24	0.72
In College	1.35	0.27	0.13	1.29	0.25	0.19	1.14	0.23	0.53
Gender	1.25	0.33	0.39	**1.87**	**0.49**	**0.02**	**1.79**	**0.48**	**0.03**
Race	**0.47**	**0.13**	**0.01**	**0.49**	**0.13**	**0.01**	1.44	0.37	0.16
Marital Status	1.21	0.31	0.46	0.86	0.22	0.56	1.53	0.38	0.09
State K-12 standard	1.00	0.23	0.99	1.02	0.23	0.92	1.07	0.25	0.76
Discipline									
ErlyChildhd	0.85	0.32	0.66	0.94	0.33	0.87	1.58	0.54	0.18
SpecialEd	1.42	0.55	0.37	0.75	0.29	0.45	1.00	0.38	0.99
Art&Music	2.42	1.17	0.07	2.12	1.01	0.11	1.50	0.76	0.42
EnglishLang	**1.95**	**0.67**	**0.05**	0.95	0.33	0.89	1.43	0.50	0.30
ForeignLang	**2.12**	**0.77**	**0.04**	1.08	0.38	0.82	1.29	0.46	0.48
Math	1.27	0.47	0.51	1.18	0.41	0.63	1.06	0.38	0.87
Sciences	1.83	0.61	0.07	1.21	0.38	0.54	0.77	0.27	0.45
SocialStudies	0.70	0.24	0.30	0.74	0.23	0.34	0.66	0.22	0.22
Vocational	1.01	0.51	0.99	1.11	0.52	0.83	1.49	0.69	0.38
Other	**2.44**	**1.08**	**0.04**	1.24	0.53	0.61	0.74	0.35	0.53

Table V-A- Variable Definitions

Variable	Definition
Teacher Education Student Characteristics	
Age:	25+ = 1; else=0
HS Course:	High School Personal Finance Coursework = 1; else=0
College Course:	College Personal Finance Coursework = 1; else=0
Gender:	Male = 1; Female = 2
Race:	White = 1; Nonwhite = 0
Married:	Married or partnered = 1; else=0
Teaching Discipline (variable = 1 if teaches in specific discipline)	
SpecialEd	
ArtandMusic	
Englishlanguagearts	
ForeignLanguage.	
Math	
NaturalScience	
SocialStudies	
Vocational	
Other (ESL, health education, library science, ROTC, and the generic other category)	

VI. RESULTS: TEACHER EDUCATION FACULTY

The findings of the teacher education faculty are based on about 100 responses to the survey. The analysis is limited by both this small sample size and because of the specialization of faculty members. In contrast to their students—both those in training and who are working in the field—teaching foci are highly correlated with other characteristics. Our analysis is largely descriptive because that high correlation violates statistical assumptions required for multivariate analyses about the independence of variation of explanatory variables.

Sample Characteristics

Geographic Distribution. Table VI.1 shows the distribution of faculty sample across the four regions and the eight states as well as that distribution for the other three samples of study respondents. The faculty percentages, with a base of 103, are almost identical to the number in each state indicating the small-sample size problem in doing any regional or state-specific analysis. The faculty sample looks much like the distribution of teachers, however. Thus we feel able to discuss the overall faculty sample characteristics, compare them to the teacher samples and draw reasonable conclusions about faculty perceptions about disciplinary training in financial literacy concepts.

Table VI.1 - Distribution of Faculty Respondents by Region and State

	NEFE Sample		
Region/state	Faculty	Teachers	Students
Total	N=103	N=504	N=627
Western Region	19.4	27.0	14.5
California	15.5	6.0	10.5
Colorado	3.9	18.5	4.0
Southeast Region	36.9	35.9	13.3
Georgia	11.6	14.6	10.0
Virginia	26.2	17.9	3.3
Northeast Region	16.5	22.0	21.4
New Jersey	5.8	16.8	14.5
Pennsylvania	11.7	3.1	6.8
Midwest Region	26.2	22.5	50.7
Iowa	13.6	7.4	14.3
Wisconsin	12.6	12.9	36.4

Demographic Characteristics: Because we are interested in how faculty both reflect and shape the characteristics of those who teach K-12 students, we compare characteristics of the School of Education faculty members with those of the teacher sample (Table

VI.2).[39] Compared to the teachers (and the teacher education students they teach, see Section V) the faculty in Schools of Education have a higher proportion of males, although the majority of our faculty respondents (57%) were females. They are only slightly more likely to be married and white and, of course, were far more likely to hold a PhD. The mean age of the faculty was 50 with a range of 31 to 70 and they are quite evenly distributed across rank (Table VI.3). Note that while not all are in the tenure-track ranks, they all answered positively to the screener question whether they were responsible for the preparation of K-12 teachers.

Table VI.2 - Faculty and Teacher Respondents' Demographic Characteristics

	Teacher Sample	**Faculty Sample**
Male	28.7%	43.2%
Female	71.3	56.9
Race/Ethnicity		
White	83.9%	91.1%
Marital Status		
Married	71.2%	83.2%
Never Married	14.6	5.2
Div/Wid/Sep	13.3	11.9
Highest Degree		
PhD (or equiv)	1.7%	87.2%
Masters	51.8	12.8

We asked faculty both their general education focus and the primary subject matter focus of their appointment. Because the latter corresponds most closely to the teaching disciplines we asked of the students and teachers, we list those below, aggregated both because of small numbers of faculty and according to the disciplinary distinction that differentiated whether K-12 teachers had taken a course or were teaching a course that included personal finance content (Table VI.4). How disciplines were categorized into these categories is described in Table VI-A at the end of this section. The primary discipline did not easily distinguish, as it did for teachers, those whose primary focus was

[39] Because Wisconsin is more heavily represented in the students sample than in either of these two we do not compare overall characteristics with them.

on elementary student teaching, since some disciplinary fields (e.g. curriculum and instruction) are not grade specific.[40]

Table VI.3 -
Faculty Sample by Academic Rank

Faculty Rank	**% of Respondents**
Professor	25.2
Associate Professor	21.4
Assistant Professor	32.0
Other (lecturer, administrative, faculty associate)	21.4

Table VI.4 -
Faculty by Primary Teaching Discipline

Teaching Assignment	**Percent**
Arts & Language	23.3
Health and Physical Ed	6.8
Mathematics	13.6
Natural Science	12.6
Social Sciences	12.6
Voc / Tech Education	24.3
Other	6.8

Teaching Personal Finance: Faculty Experience

Descriptive Statistics: We asked faculty members whether they had ever taught financial literacy to students at the K-12 level and whether they had done so at the

[40] Twenty faculty indicated their primary focus was on early or elementary education.

college/university level.[41] The first question was to capture the faculty member's own experience in teaching this material to the students they were preparing others to teach, and the second if they were teaching this material to future K-12 teachers. As shown in Table VI.5, a minority of faculty have taught such content to either K-12 students or at the college/university level. We also asked if in "the past **three years,** as a college/university faculty member, have you participated in any [set of activities, listed] related to financial literacy or the teaching of financial literacy?" These activities included serving on committees, teaching workshops, conducting research, or revising courses on financial literacy topics. Only 14 percent of the faculty responded they had done any of these activities.

Table VI.5 - Faculty Experience in Teaching Financial Education Content[a]

Type of Integration	K-12	College Level
Ever Taught	27.4%	16.5%
In a separate course	2.9	6.9
Integrated into a course	26.5	10.7

[a] Multiple responses may be given.

Table VI.6 - Faculty Teaching Courses with Financial Literacy Content (by discipline)

Math and Science	0.0%
Social Studies	44.4
Professional/technical	36.0
Language and arts	0.0
Other	7.7
Total	17.7

In Table VI.6 we show the percent of faculty members in each discipline who have taught a course with financial literacy content. The small sample does not allow for the more detailed disaggregation of disciplines that we were able to provide for the teacher and student samples. Nevertheless, it appears that in teacher education at the university/college level as well, the teaching of financial literacy is concentrated in those disciplines where it has been traditionally taught—in social studies and the professional/technical fields. These are the fields in which coursework in financial literacy concepts is provided. That faculty members in the math and science disciplines

[41] We do not know if they had taught the K-12 lessons when they were themselves K-12 teachers or if they did so as invited guest to a K-12 class.

do not include financial literacy content in their teaching is consistent with the low probabilities of math teachers having had such a course, even though math teachers have a higher than average probability of later including financial literacy content in their own teaching (see Table IV.10).

Teachers' Opinions on Personal Finance Education

Faculty member were asked opinion questions about financial education similar to those we asked the respondents to the teachers' survey, including in which grades and subject areas they thought financial education was appropriate.

Educational Requirements. Interestingly, faculty members are much less supportive of high school financial course or testing requirements for graduation than are the teachers in K-12 Schools (Table VI.7). Only 29 percent strongly agree with the statement that "Students should either be required to take a financial literacy course or pass a financial literacy test prior to graduation from high school" compared to 46 percent of the K-12 teachers. Yet they are more likely to *disagree* with the statement that elementary school students would find financial literacy topics too complicated.

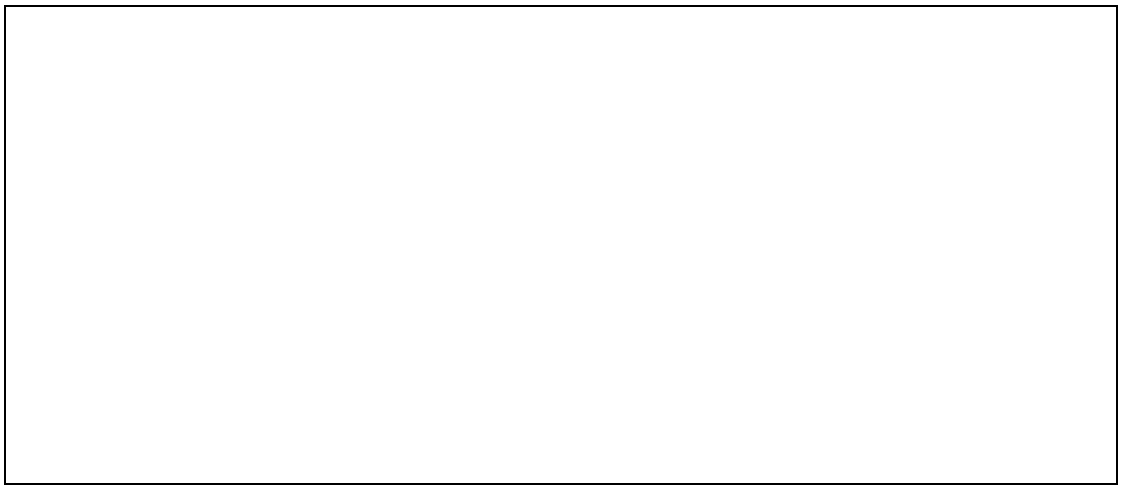
When asked specifically "Where in the school curriculum do you think financial literacy belongs?" with multiple responses allowed, 88 percent of faculty members checked grades 9-12 and 80 percent selected middle school grades. In contrast to K-12 teachers, faculty members were more supportive of early education in financial literacy, with 60 percent checking at grades 3-5 and 30 percent the PK-2 option. This contrasts with the 37 percent of K-12 teachers who checked grades 3-5 and the 15.8 percent checking PK-2.

Table VI.7 - Faculty Member's Opinions Regarding Financial Education Requirement

Percent agreeing or not:	Strongly Disagree	Moderately Agree	Strongly Agree
Support for HS Financial Literacy[a]			
Teachers	11.0	42.8	46.2
Faculty Member	20.6	50.0	29.4
Too complicated for elementary[b]			
Teachers	48.6	42.9	8.5
Faculty Member	83.3	14.7	2.0

a. The statement presented was: "Students should either be required to take a financial literacy course or pass a financial literacy test prior to graduation from high school."

b. The statement presented was: "I think financial literacy concepts and courses are most effective if the teacher collaborates with members of the local financial services industry."



This suggests a more favorable view among faculty of the capacity of younger students to grasp personal finance concepts and a more negative view of required coursework or testing to ensure that learning. Although we can't be certain our samples are representative of US teachers or teacher education faculty, the differences are intriguing in light of how the two groups might work together on state and district efforts to expand financial literacy instruction in schools. If states are increasingly mandating curriculum content or testing in personal finance, teacher education curricula should begin to reflect those additional requirements. Further inquiry could help shed light on these differences, for example, whether education faculty are more hesitant about the relevance of financial education content, devotion of stand-alone courses to it, and/or just a testing requirement. Much teacher education and popular literature has in recent years, focused on the problem of 'high stakes' testing requirements associated with the No Child Left Behind Act (e.g., Kohn, 2007).

Importance of Personal Finance Topics in Discipline. As we did in our questioning of K-12 teachers, we wanted to know if faculty members thought it important for K-12 teachers to be trained in their own disciplines to teach personal finance concepts. For this sample we also wanted to know whether the concentration of preparation in and teaching by teachers in the vocational and social studies disciplines was consistent with the background of education faculty members and their perceptions about what was important in those disciplines. If faculty members perceived preparation of teachers in their discipline to be consistent with perceived importance of preparation, percentages should be similar across these categories.

Consistent with our findings about K-12 teachers, Table VI.8 shows that few of the faculty respondents see financial literacy as a subject that should be a major part of their own subject matter area (only 7% of the faculty compared to 10.1% for teachers). With virtually the same probability, one in five (24% of faculty versus 20.5% of the K-12 teachers) do not believe it should be incorporated into their subject area at all. And they have even more negative views of the lack of preparation. While 76 percent of the faculty believe it is *somewhat* or *very* important for teachers in their area to be prepared to teach financial education, only 32 percent (versus 44 percent of the teachers) believe

that teachers are correspondingly somewhat or very well prepared to do so. While the views of K-12 teachers and faculty correspond on average, faculty are more likely to perceive teachers as not prepared to teach financial literacy topics.

Table VI.8 - Faculty Members' Perceived Relevance of Financial Education in Own Subject-Matter Area

	Not at All	**Limited Degree/ Somewhat**	**Major Part/ Very**
Should FL be incorporated in your subject matter area?	28.0%	65.0%	7.0%
How important is it for teachers in your area to be prepared to teach FL?[a]	23.8	56.4	19.8
How prepared are teachers in your area to teach FL?[a]	68.0	29.0	3.0

[a] Faculty were asked about teacher education students' preparation.

As might be expected, opinions about the importance of preparation for teaching financial education vary across disciplines. Table VI.9 shows the percentages of faculty respondents who gave the most negative responses to the three questions in Table VI.8 about teaching financial education in their areas, by respondents' discipline. Responses correspond, by discipline, to those in column 1 of Table VI.8—the percentages of faculty members who gave the "not at all" response to those three questions. If faculty members thought K-12 teachers in their own disciplines were well prepared to teach financial education to the degree important for the discipline, one would expect the percentages across each row to correspond.

Table VI.9 - Faculty Members' Perceived Relevance and Preparation to Teach Financial Literacy: by Own Subject-Matter Area

Respondent's Discipline	**Not incorporate**	**Not important**	**Not prepared**
Math and Science	37.5	43.8	81.2
Social Studies	11.1	11.1	77.8
Professional/technical	4.35	0.0	26.1
Language and arts	20.0	25.0	73.3
Other	38.5	30.8	92.3

Total	21.0	20.8	64.5

The areas where teachers were most likely to have taken courses with financial literacy content (Table IV.4)—social studies and the profession/technical disciplines—are those in which faculty respondents are least likely to say that financial literacy is not important. As would be expected, faculty members' perceptions of the importance of teacher education students being prepared to teach financial education parallel those about incorporation into the subject area; if the faculty member doesn't think it is important to teach the material, then preparation to teach is also seen as not important (col. 2).

However, a far higher percentage of faculty members see teachers in their own education disciplines as unprepared to teach financial education as report financial literacy is not important to incorporate. Indeed faculty members in all disciplinary groups believe on average that preparation lags seriously behind the importance in the discipline of training to teach financial education topics. Only faculty in the professional disciplines see the majority of education students as at least somewhat prepared to teach financial literacy concepts. Education students in these topic areas are typically required to take courses in economics or keep abreast of current financial developments.

Faculty Members' Perceived Competency to Teach Financial Topics. To gain a sense of faculty members' own preparedness to teach personal finance education at the college/university level, the survey asked how competent respondents felt to teach specific topics included in educational standards such as those identified by the Jump$tart Coalition (2007) and in the National Endowment for Financial Education High School Financial Planning Program (2007). Table VI.10 compares faculty members' answers to those of teachers in the field about their own felt competencies to teach specific topics. The sense of competency in teaching each topic area is virtually the same for the two groups, with faculty feeling perhaps somewhat more competent to teach their students about income and careers and financial responsibility and decision making. Although faculty numbers are small, so percentages can shift with just a couple cases, the same more limited felt competency is seen for both groups in teaching about risk management and insurance and saving and investing.

Table VI.10 - Faculty Members' Perceived Competency to Teach Financial Literacy Topics						
	Not Very %		**Adequately %**		**Very %**	
Topic Area	Teachers	**Faculty**	Teachers	**Faculty**	Teachers	**Faculty**
Income and Careers	26.6	**37.0**	54.1	**37.0**	19.3	**26.0**
Planning and Money Management	31.7	**30.3**	50.2	**50.5**	18.1	**19.2**
Credit and Debt	33.3	**32.7**	49.9	**46.5**	16.9	**20.8**
Financial Responsibility and Decision Making	40.8	**33.7**	46.5	**46.5**	12.7	**19.8**
Saving and Investing	46.4	**44.6**	41.8	**40.6**	11.9	**14.8**
Risk Management and Insurance	52.7	**43.6**	39.1	**41.6**	8.2	**14.8**

Knowledge of personal finance curriculum standards. As shown in Table VI.11, the majority of faculty members reported being not well qualified to use either the Jump$tart standards for personal finance education or their state standards for financial education (68% and 60%, respectively). Additionally, about one-quarter of faculty reported not being familiar with these educational tools for establishing curriculum goals. It is interesting to note that the number of faculty members reporting they felt 'not well qualified' to use personal finance education standards is far greater than the number reporting they felt 'not very competent' to teach the various personal finance topics or subject matter areas (Table VI.10). This implies that those responsible for monitoring compliance with state educational standards in this area are missing a major user of standards—those faculty training K-12 teachers who are intended targets for implementing those standards. Indeed a simple chi-square test indicates that faculty in states with K-12 financial literacy standards[42] are no more likely ($X^2 = .0008$; $p = .97$) to teach a course related to personal finance education suggesting that these education

[42] All in the present study but Georgia and New Jersey (NCEE, 2007)

standards have not yet affected the preparation of teacher education students. In addition, while Jump$tart standards are only intended to guide curriculum development, these results suggest that they are not even being explored for potential use in teacher training curriculum.

Table VI.11 - Faculty Members' Perceived Qualification to Use Standards for Designing Personal Finance Education Programs (percent of faculty checking scale option)

Type of Standard	**Not Well Qualified**		**Adequately Qualified**		**Very Well Qualified**		**Not Familiar With**	
	Faculty	Teachers	Faculty	Teachers	Faculty	Teachers	Faculty	Teachers
Jump$tart Standards	68.3	71.0	4.0	8.4	3.0	3.4	24.8	16.9
State Standards	60.4	63.8	10.9	15.8	1.0	5.7	27.7	14.7

Perceived ability to design curriculum. Besides feeling unqualified to use these two types of personal finance educational standards, faculty members were equally as likely as K-12 teachers to report feeling limited in their ability to design disciplinary-specific curriculum and resources, employ instructional strategies and assess specific learner needs. As shown in Table VI.12, over half of faculty reported feeling 'not well qualified' to integrate financial education concepts into their discipline, use on-line learning resources, modify financial education methods and content for diverse learners, or develop examples to explain financial concepts. Similar numbers reported feeling 'not well qualified' to determine how students' social/cultural background relates to financial understanding or to assess the impact of instruction on students' financial behavior.

Table VI.12 - Faculty Members' and Teachers' Perceived Qualification in Other Pedagogical Domains: Percentage not feeling well qualified

Pedagogical Domain	Teachers	Faculty Member
Design Curriculum and Resources		
Integrate FL concepts in your discipline(s)	54.6%	54.0%
Use on-line FL learning resources	55.9	53.0
Employ Instructional Strategies		
Modify FL methods and content for diverse learners	58.0	62.0
Develop examples to explain FL concepts	60.0	60.6
Assess Learner Needs		
Students' FL understanding	49.3	60.0
How social/cultural background relates to FL understanding	54.3	62.2
Degree to which instruction affects students' financial behaviors	56.9	52.0

Summary of Faculty Sample Results

Our sample of faculty was too small to conduct multivariate analyses of probability of teaching financial literacy courses. Math, science and the languages perfectly predicted (not) teaching and so were dropped from all regressions, leaving only social science (including "other" disciplines) to be compared with professional/technical areas. Faculty members preparing teachers to teach in the professional/technical disciplines were more likely to teach a course with personal finance content. No demographic or teaching experience and rank variables were statistically significant predictors of having taught such a course. Nevertheless, while our sample is small and we can present descriptive statistics only, our data lead to some valuable insights about the training of K-12 teachers to fulfill mandates and guidelines on teaching financial literacy topics.

In Schools of Education it appears that curriculum that deals with financial literacy topics and methods of teaching personal finance topics remains concentrated in courses in the professional/technical education curriculum. It is in these disciplines that K-12 teachers, when in college, took courses with personal finance content, in part because it is faculty in these disciplines who feel the content is important in that discipline. While faculty members view the capacity of younger students to be taught financial literacy concepts, in fact few faculty in our survey actually teach courses that have such content, including material on how to teach them. Faculty members are not familiar with their own state standards or materials they could access to teach key financial concepts. K-12 teachers look very much like teacher educators in their felt competency to design curriculum, teach key concepts, access resources, and assess students' learning needs.

VII. CONCLUSIONS AND IMPLICATIONS

This study surveyed a national sample of K-12 teachers, pre-service students and teacher education faculty members to discern teachers' personal financial concerns and capacity to teach financial literacy education. Eight states—two in each census region—were selected; samples of teachers were from K-12 schools identified by city size with education faculty and teacher education student samples drawn from a higher education institution in those states. Because the survey utilized publicly available e-mail addresses for the K-12 teachers and education faculty surveyed, and because the researchers did not have direct access to all e-mail databases used to contact students, it is not possible to conclude that the respondents represent truly random samples of these groups. However, analysis of the characteristics of the respondents lead us to conclude that the study participants do quite reasonably mirror characteristics of the target populations in terms of demographic characteristics, and that they reflect a realistic diversity of financial education-related experience among the groups.

Conclusions from the Study

Teachers' Background and Views on Financial Education

One striking conclusion of this study is that a majority of teachers (both those practicing and in-training) recognize the need for personal finance education in K-12 schools. All but a small minority (11% of teachers and 14% of students) agrees or strongly agrees that it would be desirable for students to take a financial literacy course or pass a test for high school graduation. At present, however, few teachers are teaching financial topics (29.7% do so) in any way and very few (7.6%) teacher education students are gaining experience in developing financial education lessons or curriculum.

Disturbingly, from both personal and professional perspectives, present and future teachers as a whole are acquiring very little formal education in personal finance, whether through credit-based courses (only 37% of teachers and 30.8 % of students had taken a related college course; only 20% of students had a course in high school) or non-credit offerings (only 18.9% of teachers had taken a personal finance workshop and only 11.6% a workshop on teaching personal finance). This is important, because having had formal education related to personal finance (especially college coursework for practicing teachers and high school coursework for teacher education students) is a significant predictor of teachers' own perceived competence to teach personal finance topics.

A noteworthy finding is that teachers in some subject matter disciplines are gaining more preparation in personal finance than others. Teachers with backgrounds in vocational education and social studies are more likely than those in other disciplines to have taken personal-finance related coursework for credit and these teachers (plus those in math) are the ones most likely to feel competent to teach and to actually be teaching financial topics.

Although most teachers have limited formal education related to personal finance, they do appear to have somewhat more personal finance experience and contact with the financial services industry than individuals in US households overall. Thus, teachers may be more knowledgeable about personal finance than the general population. These experiences are likely to be complex and focused primarily on adult needs, however, and may account for the fact that teachers see financial education as something appropriate primarily for higher grades. Relatively few teachers see financial education as a subject that should be taught in the preschool and elementary grades. And more than half of both groups agree or strongly agree that financial education is too complicated for elementary school children.

Teachers' Financial Concerns

Despite the fact that teachers may have more financial experience than the general US population, they do have a number of important personal financial concerns. Chief among these for practicing teachers (expressed by nearly half) is knowing whether they will have sufficient income during retirement. The other top teacher concerns are all also related to either ascertaining or achieving income adequacy (e.g., ways to supplement my income and whether I am using the best investment strategies). The financial concerns expressed by the largest numbers of teacher education students connote a widespread insecurity about income adequacy (e.g., top concerns were determining ways to supplement my income and not having sufficient income to meet my needs). However, other top concerns expressed by the students (using best investment strategies, having enough money for retirement) indicate they are not just 'living in the moment' and would welcome assistance in addressing financial matters using longer-term as well as short-term planning frameworks. For the most part, financial concerns are more similar than different among teachers and teacher education students, although some background characteristics such as marital status, gender, and race are important predictors of some specific concerns, such as paying for children's college education and investment strategies.

The concerns expressed by teachers and teacher education students are similar to those that characterize the general US population. And both groups of teachers report adhering to financial practices associated with financial well-being. These findings imply that teachers may share the financial concerns facing the students they teach and their families, but are also able to manage finances and seek advice in ways financial education programs hope to teach. This may make education students and K-12 teachers receptive to programs aimed at increasing their own financial well-being as well as to training on how to translate their own knowledge and practices into teaching K-12 students.

Teachers' Capacity to Teach Financial Education

Based on findings from this study, teachers' 'capacity to teach' personal finance is limited in terms of teachers' perceived preparedness in both subject matter and pedagogy. Both groups of teachers expressed the greatest hesitancy about the more technical areas

of risk management and insurance and saving and investing. About half of the teachers said they were 'not very competent' to teach these topics and over half of the teacher education students said the same thing. Half of the students also said they felt 'not very competent' to teach about credit and debt and another one-third of both groups said they felt 'not very competent' to teach about financial responsibility and decision making. But having taken a personal finance-related course in college was a significant predictor of likelihood of feeling competent to teach five of the six subject areas examined.

These findings are consistent with what the paucity of prior research has revealed about teachers' readiness for the demands of teaching personal finance. They also suggest that much has not changed over the past 30 years. In one of only two prior studies that examined teachers' personal finance-related subject matter knowledge, Garman (1979) found, for example, that teachers answered only about 60 percent of the questions correctly and that graduates were least knowledgeable about saving and investment (50% or items correct) and taxes (45% correct). Those who had taken a consumer education course in college had higher scores than those who had not. Garman also found that teachers certified to teach in social studies and home economics (now family and consumer sciences education) had the highest knowledge scores. Garman's objective assessment of teachers' subject-matter knowledge is, of course, not directly comparable with the self-assessment methodology used in the present study. But the similarities in the findings are notable, nonetheless.

The teacher education students and practicing teachers surveyed in our study also feel more unqualified than qualified in financial education pedagogy, including ability to use financial education standards, design curriculum and resources, employ instructional strategies and address learner needs related to personal finance. Although there are a couple of pedagogical areas where more students than teachers feel adequately or very well qualified (using on-line learning resources and determining how social/cultural background relates to financial understanding), for the most part, the proportions of both groups expressing various levels of qualification are similar – and overall more negative (not well qualified) than positive (adequately or very qualified). All but a very few teachers (12%) and students (8%) said they were either not well qualified to use or not familiar with the Jump$tart standards for personal financial literacy. An important note, though is that there appears to be a great deal of variation in level of preparedness overall among teachers in various disciplines with those in vocational education areas feeling the best prepared.

Again, these findings are consistent with previous research about teacher readiness. Parsad, Lewis, & Farris (2000) found, for example, in a national survey of teacher preparation that while most (96%) teachers felt very well or moderately well prepared for teaching overall, they felt much less prepared in specific aspects of pedagogy such as implementing state or district curricula (44%), implementing new methods of teaching (45%), or addressing the needs of students from diverse cultural backgrounds (32%).

The findings are also consistent with what is apparently provided in personal finance education by teacher educators—the faculty in schools of education. Our faculty sample felt no more competent to teach specific financial concepts that did K-12 teachers and were no more familiar with state financial education standards. Faculty who taught financial concepts were virtually all in the vocational and social studies areas where courses with financial content have traditionally been required. Little progress seems to have been made in making teacher education programs more broadly reflect the standards teachers are expected to implement in financial literacy.

Teachers' Openness to Teaching Financial Education and Participating in Further Education Regarding the Teaching of Financial Literacy

Findings of the study suggest that there is great variation among teachers in terms of their views about how important it is to teach and be prepared to teach financial education in their disciplines. This ranges from nearly half of art and music teachers and 40 percent of science, health and language teachers who believe it should not be taught in their subject area to less than ten percent of those in vocational education, special education, social studies, and math. Beliefs about the importance of being prepared to teach financial topics are consistent with beliefs about the importance to the discipline (if thought to be important to teach, it is correspondingly thought to be important to be prepared). Despite the fact that there are apparently many teachers who do not believe financial education is appropriate for their discipline, a positive conclusion is that a majority of both pre-service and in-service teachers is open to participating in further education regarding financial literacy (two-thirds of teacher education students and three-fourths of practicing teachers said they would be at least 'somewhat likely' to participate in further education on teaching financial education. Some individuals, particularly those who are older, have had previous coursework in personal finance-related subject matter, and have backgrounds in vocational education or social studies may be easier to 'sell' on the idea of some or more education than others. Also, for practicing teachers, familiar in-service formats such as 'for credit' and face-to-face offerings may be more appealing than others.

Implications for Practice

One of the main implications of this study is that there is a great need to expand personal finance educational opportunities for pre-service and in-service teachers, in order to meet both their personal and professional needs.

Teachers' Personal Financial Needs

In terms of personal financial needs, one of the chief concerns among practicing teachers is whether they will have sufficient money for retirement. They are also concerned with the related issues of whether they are using the best strategies for investing their money, how they can supplement their income as a teacher and pay for their children's college education. Taken together, these concerns suggest that teachers would benefit from focused personal financial programs related to investment education. However, our study

did not explore how teachers' financial concerns are related either to respondents' financial status or to the respondents' use of financial services.

Based on the literature, teachers are justified in being concerned about short and long-term income adequacy. As a whole, teachers are disadvantaged in pay compared to those employed in other occupations requiring similar levels of education (Weaver, 2005). And there continues to be concern that few teachers are taking advantage of tax-deferred retirement contribution options and that, despite new regulations governing 403b investment plans available to teachers and other nonprofit organization employees, teachers are still given too little guidance in selecting from among the options available. Despite being much younger, pre-service teachers are also concerned about whether they will have sufficient money for retirement. Thus, it would make sense to explore whether and how investment education is obtained by pre-service and in-service teachers and what may be specific barriers to accessing it.

Based upon pre-service teachers' top financial concerns, we believe they could benefit particularly from focused attention to financial planning – approached within the context of career development for individuals in the teaching profession. With perhaps the exception of vocational education and special education disciplines, teacher education programs rarely give much attention to career development, beyond providing initial job placement assistance. But helping future teachers explore career paths in education and options for pursuing them could enable teachers to be more planful about pursuing career and financial goals simultaneously while also meeting state and school district continuing education requirements—and paying for them. Payment assistance for continuing education often includes, for example, district tuition reimbursement and/or state and federal loan 'forgiveness' programs, sabbatical leaves, graduate assistantships, and incentives for National Board Certification for teachers (http://www.aft.org/pubs-reports/downloads/teachers/nbpts.pdf

Financial planning education for teacher education students would likely be most effective if focused on teachers' special career and financial circumstances and how they are related. Issues such as typical nine-month employment (and pay!) schedules, district and state continuing education requirements, options for covering costs of further education, career pathway/pay relationships and opportunities, and unique investment options for teachers would all add relevance to financial planning instruction for this group. Nine-month employment schedules, for example, are often prized by persons who, for any number of reasons, wish to have summers 'free'. But it may also be difficult for teachers who want it to find summer employment. Teacher education students (and teachers as well) would likely welcome opportunities to explore options for summer employment and/or entrepreneurial ventures—at home or away from home and related to one's disciplinary specialty or beyond.

Teachers' Professional Education Needs

The findings of this study indicate that teachers need assistance in learning more about both financial education subject matter and pedagogy. Our findings also suggest the need

for additional training in pre-service programs, where faculty may need to be made more aware of the importance of integrating this subject matter into the teacher education curriculum.

Based on teachers' own perceptions of their competency, priority for helping both practicing teachers and teacher education students gain expertise in subject-matter should be given to the topic areas of risk management and insurance, saving and investment, credit and debt, and financial responsibility and decision making. Both groups, as well as education faculty, also need assistance in becoming more familiar with how to use financial education curriculum standards, how to assess and address unique learner financial education needs, how to design and access financial education curriculum resources, and how to effectively implement financial education instructional strategies.

Since most of the financial education currently being taught is through integrated rather than stand-alone curriculum, and because there is so much apparent variation in teachers' perceived expertise and openness to teaching financial education based upon disciplinary background, we believe financial education in-service education would be most effective if either organized around homogeneous teaching specialty groups or tailored to include disciplinary-specific curriculum and instruction examples within heterogeneous in-service groupings. This is important if financial education is to expand beyond the areas where it has traditionally been taught. Although financial education curricula are often mapped to various disciplinary content standards, most of the instructional materials are nonetheless discipline-neutral. Thus, there appears to be much room for expanding curriculum resources that will facilitate integration of financial concepts throughout multiple disciplines.

Because a majority of teachers see financial education as a subject that is appropriate primarily for higher grades, we also believe teachers need assistance in understanding the developmental nature of financial reasoning and in learning how to make financial concepts accessible at different grade levels. There are a few good examples of financial education materials for elementary school age children (e.g., Bailey & Law, 2006), however, most of those currently available are more appropriate for older audiences. This is an additional area of need – development of financial education curriculum resources that can be used to facilitate integration across the lower grade levels.

Implications for Further Research (and a Couple of Policy Considerations)

This study answered many questions about teachers' own perceived capacity to teach financial education and about the financial concerns teachers have on a personal level. However, as is the case with most research, the study raises as many questions as it answers. Some of these are outlined below.

One important question that was not addressed in this study was what role teachers play in the initiation and expansion of school-based efforts to provide financial education and whether and how subject-matter and pedagogical expertise make contributions,

particularly relative to other school and community factors such as nature of the local financial services industry and district-level and school-level characteristics (e.g., curriculum patterns; school board, superintendent, principal views and instructional leadership approaches). One interesting anomalous finding of this study is that having taken a college course related to personal finance is a significant predictor of likelihood of actually teaching the subject matter in a K-12 school setting, except for math teachers. They are no more likely than elementary education teachers to be specifically trained to teach financial education, but more likely to actually be doing so. It is not clear why – although one can reasonably speculate that it is because mathematical principles (e.g., compounding and exponential growth) are well illustrated by financial concepts. This suggests that math teachers, specifically, may be open to integrating additional financial principles into their lessons and that teachers, more broadly, may be open to integration when there is a strong concurrence between the disciplinary concepts they teach and the illustrative financial principles.

Another related issue that deserves further attention is what role teachers' financial education background and financial experiences play in personal finance education classroom practices. As we noted earlier in the report, it is possible that K-12 teachers shape their views about what personal finance education is and should be based on their own personal financial experiences as much (or even more) than on any formal teacher preparation they have had. One additional important question is how and under circumstances do these teacher background characteristics and classroom practices then translate into student academic achievement for various school populations. One promising approach to addressing these questions would be examine successful personal finance education programs to identify not only best practices but the factors that contributed to their development and that have sustained them over time.

The study also raises a number of questions about how best to address personal finance preparation needs among practicing teachers and pre-service students. Given the variety of teacher education programs (undergraduate, graduate, certification only), and the variety of disciplinary specialties involved, it is unlikely that one-size is or will fit all. Where in higher education are the optimal places for providing personal finance teacher education? How and what benefits might be gained by forming various kinds of partnerships between school districts, colleges/universities, and financial services providers for providing such education? And finally, what forms of pre-service and in-service personal finance teacher education are most likely to translate into effective classroom practice and/or enhanced financial security for teachers?

Concerned about the capacity of teachers to teach economic concepts, the Council on Economic Education has developed recommendations on pre-service training in economics education. It may be time to consider developing recommendations not just on what K-12 schools must provide their students (and therefore the teachers teach) but how teachers are to be trained to teach effectively. Attention to training in the teaching of personal finance at the college/university level may also have the benefit of harnessing the considerable research capacity at that level to ascertain the most effective curricula

for nurturing greater personal finance knowledge and fostering its application to financial education programs for school and non-school audiences.

Finally, the findings of the study raise at least two questions of policy which can't be addressed simply through research. One of the most important ones relates to teacher preparation: What teacher certification standards are optimal for supporting effective personal finance education in K-12 educational settings? Should preparation involve an academic major or a minor, specific kinds of coursework, and/or a particular disciplinary background, and if so what?

Another important question concerns teachers' own personal economic well being and that is the issue of teacher compensation. As noted in the literature review, there is ample evidence that teacher pay is not commensurate with that of other professionals with similar levels of education. Given this disparity, it seems somewhat inadequate to recommend simply that teachers be given an opportunity to 'learn how to supplement their income as a teacher' or learn how to manage their finances more wisely so they will 'have sufficient income to meet their needs' (two of teachers' top personal finance concerns). Instead what it points to is a need for additional dialog about the forms, adequacy, and equity of compensation for those who perform what is arguably one of most critical tasks for our nation's future – the education of our children.

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Appendix A

STANDARDS FOR FINANCIAL LITERACY EDUCATION

One of the key foundations for designing and implementing educational programs is statements of expected learners outcomes, also knows as program standards. To be effective, teachers of financial education will need to be familiar with those established for their primary subject matter specialty as well as those in financial education and how they are related.

One of the best comprehensive sources of information about state standards for financial literacy education is a national survey that has been conducted biennially since 1998 by the Council on Economic Education (CEE). The 2004 study was funded through a five-year FACT Act grant. The purpose of the survey is to gauge how state standards, standards implementation, and state testing change from year to year.

The most recent (2004) survey revealed that:

- The number of states with standards in economics and personal financial literacy has increased over time.

- Economics standards are embedded primarily in Social Studies standards. Personal financial literacy standards are found in content standards related to Economics/Social Studies, Family and Consumer Education, Business Education, and Consumer Math standards and courses.

- Twenty-one states require that standards be implemented.

- Seven states, up from four states in 2002, make personal finance a requirement for high school graduation. Four of these states (Idaho, Illinois, Kentucky and New York) maintained requirements reported in 2002. Georgia joined this group by requiring that personal finance be part of an economics graduation requirement. Utah added a General Financial Literacy course as a requirement for graduation. Unlike other states, Alabama structured its requirement as a middle school personal finance mandate.

- Although not a graduation requirement, Kansas now requires schools to offer a personal finance course.

- Nine states (Connecticut, Georgia, Idaho, Illinois, Indiana, Kentucky, Michigan, Oregon, and Virginia) require testing in personal finance (National Council on Economic Education, 2005, p. 3).

At the time of the survey, none of the states reported having a separate set of standards for personal financial education. However, after the survey was conducted, Wisconsin developed and implemented model academic standards for personal financial literacy that "….cross all grade levels and disciplines" (Burmaster, Mahaffey, George, & Ellibee,

2006, p. 1). These standards are available for voluntary adoption by Wisconsin school districts. No student testing of personal financial literacy standards is required in the state of Wisconsin.

The Bernheim, Garrett, and Maki (2001) study, described earlier, found that students who lived in states with a mandate for personal financial education had a higher rate of savings and net worth during peak earning years than did students who lived in states without a mandate for financial education. They conclude that "These results contribute to the growing body of evidence that education may be a powerful tool for stimulating personal savings" (2001, p. 462).

Besides the state content standards, there are other sets of standards that potential and practicing financial literacy educators should be aware of. One of the most comprehensive of these is the standards developed by the Jump$tart Coalition for Personal Financial Literacy.

National Jump$tart Standards

The National Jump$tart Coalition for Personal Financial Literacy has developed one of the most comprehensive set of national standards for K-12 programs. These *National Standards in Personal Finance* serve as the basis for a number of state-level personal financial literacy standards.

The Jump$tart Coalition was established in 1997 and is a group of nearly two hundred non-profit organizations, government agencies, and corporations that advocate for personal financial literacy education throughout the U.S. by sharing survey data, informational materials, and other documents online at, www.jumpstart.org (Jump$tart Coalition for Personal Financial Literacy, 2000). The purpose of the Coalition is "to improve the financial skills of young adults by promoting the teaching of personal finance in grades K-12" (National Standards in Personal Finance, 2000, p.3). According to Vitt, et.al.(2006), the Jump$tart Coalition has been a powerful force in promoting the need for financial education of children and youth.

The Jump$tart Coalition standards were developed in 1998 by a group of professionals representing a broad range of education, government, and financial service organizations. Throughout the process, input was received from numerous teachers at the elementary and secondary levels. In 2001, a select group of classroom teachers representing business education, family and consumer sciences, and economics in the social studies reviewed the document and made suggestions for improvements.

These standards covered four key areas: income, money management; spending and credit; and saving and investing. When the standards were revised in 2007, six categories were developed: Financial Responsibility and Decision-Making, Income and Careers, Planning and Money Management, Credit and Debt, Risk Management and Insurance, and Saving and Investing. The revised standards . . . . "provide a program design and evaluation framework for school administrators, teachers, curriculum specialists,

instructional materials developers, and educational policymakers" (National Standards in K-12 Personal Finance Education, 2007, p. 1).

There is a completed set of benchmarks that correlate with the standards to indicate the knowledge and skills that students should possess at different grade levels. These benchmarks can be used for structuring personal finance curricula (Jump$tart Coalition for Personal Financial Literacy, 2002, p.3).

Teachers will also want to be familiar with academic program standards, especially those that include personal financial concepts and topics. The following set of academic program standards have been developed by disciplinary professional organizations at the national and state levels. Please keep in mind that these standards, just like the Jump$tart Coalition standards, relate to programs at the K-12 levels. The only difference is the following standards relate to specific disciplinary subject matter specialties rather than solely to personal financial literacy concepts. The three subject matter areas are Business Education, Family and Consumer Sciences Education, and Social Studies.

Disciplinary Standards Related to Financial Literacy Education

Business Education Standards. The National Business Education Association, which developed financial literacy standards for Business Education, serves individual and groups engaged in instruction, administration, research, and dissemination of information for and about business (www.nbea.org, 2001). Of the eleven competencies identified in the NBEA standards, one is labeled, "Economics and Personal Finance." Sets of standards are identified separately for Economics and for Personal Finance. The following eight standards comprise the Personal Finance section of the document: Personal Decision Making, Earning a Living, Managing Finances and Budgeting, Saving and Investing, Buying Goods and Services, Banking, Using Credit, and Protecting against Risk (www.nbea.org/curfbes.html).

Gayton (2005) conducted a study to determine the extent to which National Standards in Personal Finance for Business Education correlate with National Standards in Personal Finance Education created by the Jump$tart Coalition. After conducting a content analysis of the two sets of standards, Gayton concluded that "Jump$tart's money management standard correlated with seven of the eight NBEA standards. Two Jump$tart standards, income and spending and credit, did not align well with any of the NBEA personal finance standards" (Gayton, 2005, p.36).

Family and Consumer Sciences Education Standards. The National Standards for Family and Consumer Sciences Education, developed by the National Association of State Supervisors of Family and Consumer Sciences in 1998 and updated in 2008, consist of "sets of standards for 16 areas of study that represent the major content areas in family and consumer sciences education" (Fox, 2000, p. 11; http://aafcs.org/FCSstandards). Each of the 16 sets of standards is broken down to include a comprehensive standard that contains numerous content standards. Then, each content standard includes several competencies. One of the 16 standards, Consumer & Family Resources, relates directly to personal financial literacy.

The comprehensive standard listed under Consumer & Family Resources is:

"Evaluate management practices related to the human, economic, and environmental resources". Content standards are:

- Demonstrate management of individual and family resources such as food, clothing, shelter, health care, recreation, transportation, time, and human capital
- Analyze the relationship of the environment to family and consumer resources
- Analyze policies that support consumer rights and responsibilities
- Evaluate the impact of technology on individual and family resources
- Analyze interrelationships between the economic system and consumer actions
- Demonstrate management of financial resources to meet the goals of individuals and families across the life span (National Standards, 2008).

According to Smith, Hall, & Jones (2005), very little published research exists regarding the National Standards in Family and Consumer Sciences Education.

Social Studies Standards. The National Council for the Social Studies (NCSS) is to provide leadership, service, and support for social studies educators (www.socialstudies.org, 2006). NCSS defines social studies as

> ". . . . the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world" (National Council for the Social Studies, 1994, p. 3).

The document, "Expectations of Excellence: Curriculum Standards for Social Studies" (2002), published by the NCSS, is designed to serve as a framework for the integration of other national standards in social studies, including U.S. and world history, civics and government, geography, global education, and economics. NCSS standards aim to ensure that an integrated social science, behavioral science, and humanities approach to achieving academic and civic competence guides social studies decision makers in K-12 schools (www.socialstudies.org, 2006). A Curriculum Review Task Force of the National Council for the Social Studies has drafted proposed revisions to the NCSS Curriculum Standards and posted them for comment on their website in Fall of 2008. The revised standards utilize the same ten themes as a framework for the social studies curriculum. These are: Culture; Time, Continuity, and Change; People, Places, and Environments; Individual Development and Identity; Individuals, Groups, and

Institutions; Power, Authority, and Governance; Production, Distribution, and Consumption; Science, Technology, Society; Global Connections; and Civic Ideals and Practices.

Nature of Disciplinary Standards. The standards established for the fields of business education and family and consumer education are similar in that both include specific personal financial literacy concepts. The standards developed by both fields are practical in nature and are related specifically to everyday life issues. The standards developed for social studies, as might be expected, focus primarily on macro- and micro-economics concepts and tend to reflect the standards developed by the National Council on Economic Education (NCEE National Standards, 2007, p. 1-4).

Each of the sets of disciplinary standards targets slightly different groups of learners. The Business Education Standards focus on secondary school students (grades 9-12) and two-year postsecondary or community college students. The Family and Consumer Sciences Education standards were developed for K-12 youth and adults, while Social Studies Standards are designed for K-12 students only.

State Academic Program Standards

In addition to national standards developed for K-12 programs by disciplinary professional associations, most states have developed their own academic standards in various fields of studies. These standards are typically conceptualized by Department of Education personnel with input from both K-12 teachers and teacher educators representing universities/colleges in the state. An analysis of state disciplinary and/or grade level standards, and the financial literacy concepts embedded within them is beyond the scope of this study. However, such a survey would be a useful addition to the literature on financial literacy education.

Appendix B

FINANCIAL EDUCATION PROGRAMS AND RESOURCE MATERIAL

To be successful, teachers of financial education will also need to be familiar with the variety of personal financial education programs that are available to assist with implementing financial literacy education.

One of the most comprehensive sources of available information is the Office of Financial Education website which is designed specifically to provide a single "one stop shop" to the personal finance programs and information of the federal agencies. This is accessed at: http://www.treas.gov/offices/domestic-finance/financial-institution/fin-education/resources/)

Another particularly comprehensive source of information, programs, and materials is a description of financial education programs and initiatives of the Federal Reserve System, just one agency that is part of the Financial Literacy and Education Commission. Keeping track of this burgeoning body of material is no easy task.

Hogarth (2006) states: "Ten years ago it would have been relatively easy to provide a list of financial education initiatives; today new programs and players are added on a daily basis and it is virtually impossible to maintain a listing of current initiatives" (p. 4).

Programs and materials have been developed for a broad range of audiences; e.g., children, youth, adults, low-income families, new and potential homeowners, employees, retirees, just to name a few. They also vary greatly in topical focus and may or may not utilize explicit pedagogical or conceptual frames of reference. Researchers (Braunstein & Welch, 2002; Conssens, 2006; Danes, Huddleston-Casas, & Boyce, 1999; Fox, Bartholomae, & Lee, 2005; Lyons, 2005; Lyons, Palmer, Jayaratae, & Scherpf, 2006; Varcoe, Martin, Devitto, & Go, 2005) tend to agree that the programs and materials vary in quality and many have not been evaluated for effectiveness.

Programs and Materials from Key Organizations/Projects

Following is a description of the work of several key organizations that have designed materials for use with K-12 students and have taken steps to evaluate their effectiveness. It is notable that each of these organizations has also formed partnerships with other agencies (e.g., corporations, educational institutions, professional associations and/or foundations) to develop and deliver the financial education materials and programs.

Junior Achievement (JA). Junior Achievement (JA) is the world's largest organization dedicated to educating students in grades K-12 about economics, business & entrepreneurship, work preparation, and personal finance through experienced, hands-on programs (www.ja.org/about/about_news_fact.shtml). As a worldwide organization, JA is composed of a wide range of businesses and academic institutions and depends heavily on volunteers to give presentations in classroom and after school locations in inner cities, suburbs, and rural areas throughout the US and in 100 other countries.

JA offers programs at the elementary, middle, and high school levels. Many of the programs relate to macro and micro economics but at each level, there is at least one curricula pertaining to personal finance concepts (www.ja.org/programs/programs_eval/). Of the eight curricula at the elementary level (Ourselves, Our Families, Our Community, Our City, Our Region, Our Nation, JA Dollars $ Sense, & JA Enterprise Village), all but two (Our Region & Our Nation) focus on financial literacy concepts. Of the twelve middle school curricula, three (Personal Economics, JA Finance Park, JA Economics for Success) focus specifically on personal finance concepts. Fourteen curricula comprise the high school programs. Two (JA Personal Finance and MMBiz: My Money Business) focus on personal financial literacy. JA has also partnered with the National Endowment for Financial Education to expand the reach of NEFE's High School Financial Planning Program (HSFPP).

According to information on JA's website (www.ja.org), JA is one of the few global non-profits to use independent, third party evaluators to gauge the impact of its programs. Results of the studies for each level are posted on the JA website.

The effectiveness studies have been conducted since 1993 and findings indicate that JA has a positive impact in a number of critical areas relating to economics and business. For example, a summative evaluation was conducted of the program, JA Personal Finance, during the 2002-2003 school years by Worldwide Institute for Research & Evaluation (WIRE). Findings indicated that students who participated in the program increased their knowledge, comprehension, and application of the following conceptual areas: (1) Income, salary, and wages; (2) Tax sources, processes, and payments; (3) Venture capital; (4) Expenses and assets; (5) Function of the Federal Reserve; (6) Insurance types, costs, and selection criteria; (7) Importance and function of savings; (8) Occupational categories; (9) Relationship of education to income; and (10) Retirement planning.

JA has also partnered with Visa to develop and disseminate a national program called, Practical Money Skills for Life (www.practicalmoneyskills.com). This program and website, has several interactive tools (e.g., a cell phone game called "Financial Football" sponsored by Visa and the National Football League, interactive calculators, and a banking tutor), and free teaching resources developed by corporations. It contains "stand alone" lesson plans for teachers rather than a complete curriculum guide. However, the website does provide a space for aligning concepts in lesson plans to curriculum standards in each state. The website does not mention any evaluation of the Practical Money Skills for Life program.

Cooperative State Research, Education, and Extension Service (CSREES). Financial education for youth is just one of the many program efforts of the Cooperative State Research, Education, and Extension Service (CSREES), an agency within the U.S. Department of Agriculture. As indicated on their website, www.csrees.usda.gov/Extension/), it is a nationwide, non-credit educational network. Extension personnel have partnered with numerous non-profit organizations to help families and youth develop and strengthen numerous competencies, including those related to the basics of money—earning, spending, and saving.

One example of curriculum materials developed by Cooperative Extension workgroups is "MoneyTalks: Should I be Listening?" These materials were designed to reflect the findings from a survey of California teens that were asked what they wanted to learn about financial education and how they wanted to learn it. A pre-and post-test was administered to students who worked with the materials in selected California classrooms. Results indicated that both financial knowledge and positive financial behavior of the teens increased after participating in the "Money Talks" curriculum.

Another specific program offered throughout the nationwide 4-H Cooperative Curriculum System within CSREES focuses on setting financial goals, understanding credit, and learning about financial planning. According to Mincemoyer & Furry (2003), the program, called "Financial Champions," was developed for middle school youth in both non-formal settings such as 4-H and in formal school classrooms.

Using a nominal group process to identify and prioritize concepts, the program was designed by financial management and youth development specialists from 12 states (Mincemoyer & Furry, 2003). Experiential activities were designed to address national standards for Family and Consumer Sciences Education and those developed by the National Council for Economic Education as well as the JumpStart Coalition.

The "Financial Champions" materials were initially evaluated using a convenience sample of youth and adults associated with Cooperative Extension 4-H programs from across the nation. Adults were sent packets of materials to evaluate and youth received materials to complete. Then, both participating adults and youth responded to a survey regarding their perception of knowledge gained from the materials and life skills learned and practiced. Of the youth who completed the activities, 60% indicated they "learned something" to "learned a great deal." Respondents also indicated that life skills such as "making decisions" and "thinking critically" were practiced more often after completing the activities (Mincemoyer & Furry, 2003). Although they noted the findings were encouraging, the researchers indicated that additional evaluation research is needed to document financial learning and skill development for youth who complete the curriculum.

Besides promoting other youth financial education programs such as "Consumer Savvy," which focuses on consumer education skills and "Be the E," an entrepreneurship curriculum, the Cooperative Extension Services also partners with the National Endowment for Financial Education to increase financial literacy among the nation's youth.

National Endowment for Financial Education (NEFE). NEFE, established in 1997, is a non-profit foundation dedicated to helping people take control of their finances. The foundation partners with organizations, business, and corporations to conduct educational sessions relating to financial literacy, to sponsor research projects, and to create and disseminate educational materials. NEFE personnel have also created financial education materials in house and disseminated them to groups throughout the nation. Vitt et.al. (2005) note that "As a public service, and in trailblazing fashion, NEFE helped a wide number of organizations develop and distribute personal finance education materials where none existed before" p. 21. For example, through collaboration efforts, NEFE has provided financial education materials for special needs groups, such as Native Americans, homeless individuals and families, those caring for Alzheimer's patients, and others.

One set of materials created by NEFE is the *High School Financial Planning Program* (HSFPP), provided to schools by NEFE at no cost. It was developed in partnership with the U.S. Department of Agriculture Cooperative State Research, Education and Extensive Service and participating Land-Grant University Cooperative Extension Services (CES); and with the Credit Union National Association, Inc., and America's Credit Union (CUNA).

The HSFPP was introduced in 1984 as a public service project and has been utilized by nearly four million young people. Besides the seven-unit curriculum guide, the program includes an extensive instructor's manual, student workbook, and student personal financial portfolio. Coursework focuses on goal setting, budgeting and saving, while covering topics such as financial responsibility, earning money, compound interest, credit and insurance.

Evaluation of the HSFPP materials was initially conducted in 1997-1998 by Danes, Huddleston-Casas, and Boyce. Findings indicated that teen participants increased their knowledge of selected financial education topics, made positive changes in their money management behaviors, and increased their confidence in managing money (Danes, Huddleston-Casas, and Boyce, 1999).

A second national evaluation of the HSFPP was conducted in 2003-2004 by Sharon Danes, Professor and Family Economist at the University of Minnesota. The study showed significantly improved teen financial knowledge, confidence, and behavior immediately following the program as well as three months later. A complete copy of the "Evaluation of the NEFE High School Financial Planning Program" is available on the NEFE Web site, at www.nefe.org, in the Education Programs section.

Family Economics & Financial Education (FEFE. The mission of the Family Economics & Financial Education Project (http://fefe.arizona.edu), which began in 2001, is to provide educators with no-cost curriculum materials and the skills and confidence to effectively teach family economics and finance. This is accomplished through an annual grant from Take Charge America, Inc., a non-profit debt counseling and management service located in Phoenix, Arizona. Other partners include the University of Arizona,

Montana State University, Family, Career and Community Leaders of America, and the National Council of Economic Education.

According to Haynes and Chinadle (2007), the FEFE project is based on three core principles: (a) materials are written by and for educators, (b) materials are designed to promote active learning and to address the multiple intelligences model, and (c) teacher training courses and workshops are an integral part of the project. Further, the curriculum materials are aligned to a number of state standards and all lesson plans are designed independent of one another so that educators may teach a semester course, a unit of study, or a single lesson plan.

Haynes and Chinadle (2007) also indicate that continuous evaluation is part of the project. For example, one study

> "found a statistically significant difference in knowledge gained by students in the semester long curriculum as compared to knowledge gained by a group of students learning through random lessons in family economics and finance and to a control group that received none of the educational materials" (p.10).

Materials Available Through Centers for Financial Education

Financial education programs and materials for K-12 students are available through a variety of centers established to promote financial or economics education. Often, these are located on college/university campuses. These centers are funded and supported by various sources. Three examples are described below.

The Council for Economic Education (formerly National Council on Economic Education), established in 1949**,** funds and sponsors over 200 centers on university campuses throughout the nation. These centers are designed to train teachers, disseminate materials, and promote curriculum reform in economic education and financial education. In 2001, personal financial education was included in CEE's mission and the curriculum guide, "Financial Fitness for Life" was developed and disseminated through its network of state councils and centers. The resource guide is designed to teach youth about the following concepts: Saving, Investing, Using Credit, Understanding the Stock Market, Buying Smart, and Managing Money. It also meets national and most state content standards in four areas: Economics, Language Arts, Mathematics, and Personal Finance. No evidence of effectiveness of the Financial Fitness for Life curriculum is given on the CEE website http://www.councilforeconed.org.

Over time, CEE has served as an advocate for economics education, sponsored research efforts, and commissioned numerous studies and surveys. This includes the 2007 study of state standards for personal finance and economic education described earlier in this review.

The Networks Financial Institute (NFI) at Indiana State University is funded by a Lilly Endowment and provides leadership for: (a) developing financial literacy standards and accompanying curriculum for K-12 learners in Indiana and (b) providing resources.

These include a website (www.networksfinancialinstitute.org) and a mobile financial literacy classroom, "The Money Bus" for children in Indiana. The NFI also conducts and disseminates a variety of research studies and publications, such as policy briefs and working papers, related to financial literacy.

The University of Rhode Island Center for Personal Financial Education, a joint venture between the Consumer Credit Counseling Service of Southern New England and the University of Rhode Island, is an educational resource and research center established to advance the adoption of sound personal financial practices. It has a three-part mission: research and program evaluation, product development, and outreach. The Center also disseminates a newsletter called "Focus on Youth: Money Matters." It includes the latest research related to teens and money and provides information about new financial education teaching resources. (www.uri.edu/hss/hdf/gff/about.html).

Materials Available Through Other Internet Sites

Another source of programs and materials is internet sites. There are a myriad of these and they are filled with articles, media kits, curriculum guides, games, calculators, videos, books, worksheets, and structured courses on a variety of financial education topics for children, youth, and adults.

As might be expected, some of the web sites have questionable content and biased information but at the same time, there are many sites with well-designed and up-to-date content and information that is written and presented in a clear, understandable manner (Vitt, Reichbach, Kent, Siegenthaler, 2005).

For a detailed list of websites containing financial information, see Vitt, Reichbach, Kent, Siegenthaler, 2005, p. 199.

Appendix C

SAMPLE IN-SERVICE PROGRAMS FOR TEACHERS OF FINANCIAL EDUCATION

A key to expanding financial education in K-12 programs will likely be providing in-service education for practicing teachers. One organization that has provided a good deal of this programming for teacher is the Council for Economic Education (CEE). However, until just recently, most of the efforts by CEE focused on economic education, not personal financial education. This second foci was added in 2001 to address the growing concern about the lack of financial understanding among children and youth.

A variety of approaches are now being used to provide personal financial literacy in-service education for teachers. These include non-credit continuing education programs and graduate level credit courses and may or may not included curriculum development, collaboration between colleges/universities and financial industries, and direct response to state-level mandates. Several examples of such programs follow.

The unique features of each program, including the content, format, and funding sources, are included.

Family Economics and Financial Education (FEFE)

According to the FEFE website (http://fefe.arizona.edu), the FEFE project has a sophisticated program for training teachers to use their materials. In fact, one of the core purposes of the project is providing in-service education for teachers of family economics and finance.

FEFE has offered summer workshops/seminars to teachers across the nation regarding the FEFE curricula. Training sessions are conducted by FEFE staff members and a select group of master teachers who have a strong knowledge base in family finance, have received training in the FEFE curricula, and have experience in conducting in-service education. These week-long summer workshops are targeted to financial educators at all grade levels. Stated objectives are to (a) familiarize participants with family economics and financial education literature that is relevant to middle and high school students and community outreach programs, (b) design a course plan using the FEFE materials and activities, (c) understand how to effectively incorporate family economics and financial education into numerous educational settings, and (d) examine the socialization process by which learners gain skills, knowledge, and attitudes as a consumer in the marketplace.

National Endowment for Financial Education (NEFE) www.nefe.org

The NEFE website includes the complete set of HSFPP materials including visuals, manuals, student guides, and lesson plans. It also provides cross walks between the HSFPP and key national curriculum standards as well as those in all state curriculum standards. NEFE staff members conduct workshops and sessions for teachers of financial education in sites across the nation. Additionally, NEFE has formed partnerships with the U.S. Department of Agriculture Cooperative State, Research, Education, and Extension

Service, the Credit Union National Association, Inc. (CUNA), and America's Credit Union to disseminate the HSFPP curriculum.

Jump$tart Coalition for Financial Literacy www.jumpstart.org

The Jump$tart Coalition for Financial Literacy sponsors programs, workshops, and courses for teachers across the nation. Much of Jump$tart's work is conducted through its state affiliates. By cooperating with state and federal agencies, educational institutions, financial institutions, corporations, businesses, and community-based organizations, the Jump$tart Coalition is able to host yearly conferences for teachers in nearly every state. Although the content of the conferences varies from year to year, the objective is to strengthen teachers' ability and skills to teach personal financial education. In some states, there are sessions to help teachers with their own money management skills so that they will be better able to assist children and youth in establishing sound financial practices. Although sessions may vary somewhat in content, many also focus on state and national policies that promote financial education, best classroom practices, up-to-date resource materials, and forming partnerships with local financial experts.

National Institute of Financial & Economic Literacy (http://wdfi.org)

In 2001, the National Institute of Financial & Economic Literacy, then called the Wisconsin Institute of Financial & Economic Literacy, sponsored the first Wisconsin Institute Teacher Education series, a one-week, three-credit graduate course for teachers of personal finance in the state of Wisconsin. By 2005, the Institute was available to teachers throughout the country and offered three one-week courses at Edgewood College in Madison, Wisconsin during summer months. In recent years three courses are offered in:

- Paychecks, Financial Contracts and Entrepreneurship
- Investor Education, Economics and Insurance
- Credit and Money

The website also includes a link to the CBM Credit Education Foundation, Inc., a private foundation that funds programs concentrating on financial literacy and emphasizing credit education located primarily in, but not restricted to, Dane County, Wisconsin. The National Institute of Financial and Economic Literacy also cooperates with various financial institutions in the state of Wisconsin to provide educational programs to interested groups, organizations, and businesses.

University of San Diego

Two on-line, continuing education money management courses for elementary and secondary teachers are offered by the University of San Diego's Division of Continuing Education. The one-credit courses are advertised on the Practical Money Skills for Life

Visa USA website (http://www.practicalmoneyskills.com) and the cost is only $65 per course.

One course, "Personal Economics for Teachers" is unique in that it focuses on helping teachers hone their own finance skills. Teachers are given the opportunity to develop a personalized money management plan that will help them achieve either a short or long-term financial goal, such as saving to take a family vacation or to start a new business. The other course, Teaching Money Management, helps teachers find innovative ways to incorporate personal finance learning in the classroom.

The content portion of each course incorporates the teacher training curriculum component of Practical Money Skills for Life, a free bilingual money management program provided by VisaUSA. This program is complete with lesson plans, presentation materials and in-class activities and is mapped to state educational standards.

Commonwealth of Virginia

In response to 2005 legislation requiring Economics and Financial Literacy objectives for all middle and high school students in the state of Virginia, the Department of Education (http://doe.virginia.gov) held seven regional one-day training institutes throughout the state in Summer, 2006. The training sessions were designed to assist middle or high school mathematics, history and social studies, and/or career and technical education teachers to implement economics education and financial literacy into Virginia's curricula for all students.

In addition, the Virginia Jump$tart Coalition held financial literacy summits for leaders in education, business, nonprofit organizations, and government to examine ways to integrate personal finance education in the classroom. Part of the session included a panel of Virginia middle and high school educators that reviewed best practices and teaching tips for integrating personal finance education in the classroom as well as a hands-on training session by Dr. Celia Hayhoe from Virginia Cooperative Extension on the National Endowment for Financial Education's High School Financial Planning Curriculum. Sponsors of the events were Capital One, Citigroup, and Wachovia.

Invest North Dakota Teachers Academy http://www.ndsecurities.com/investor-education

For the past ten years, a two-credit graduate course, Invest in North Dakota, has been offered to all K-12 North Dakota teachers and administrators. The course is designed to assist teachers in presenting personal financial planning and money management topics such as economics, responsible use of credit cards, investment alternatives, security fraud, and consumer fraud to their students. The course is sponsored and funded by the North Dakota Securities Department.

Federal Reserve Board http://www.federalreserve.gov/

The Federal Reserve Banks in all twelve districts offer programs for teachers, financial education curriculum units, and printed and on-line resource materials for use in K-12

classrooms. Federal Reserve personnel often cooperate with organizations such as the Jump$tart Coalition to serve as resource persons for conferences relating to financial education. In this role, personnel assist teachers in exploring financial literacy issues, gaining a deeper understanding of money management practices, and examining principles of personal financial education.

Summary

Although there are a number of financial education programs and educational resources for in-service teachers, little is known about the numbers of teachers that are being reached or the impact of the efforts. Some are "one-shot" programs with no evidence of follow-up activity while others are on-going with comprehensive strategic plans and well-developed, informative websites. Likewise, some programs involve multiple partnerships at state and national levels; others exist at the local level, and include partnering with a limited number of community-based organizations and financial institutions. At times it is difficult to find evidence that programs and materials are based on standards related to personal financial literacy. Although some of the programs contain references to national, state, and Jump$tart standards, others do not.

Evaluation of financial education in-service programs is a key to ensuring quality programming. However, assessment at this point appears to be limited to a few "happiness" or satisfaction efforts rather than comprehensive studies. Baron-Donvan, Weiner, Gross, & Block-Lieb (2005) stated: ". . . we could find no evaluations of teacher training programs" (p. 64).

APPENDIX D

State Personal Finance Standards/Guidelines for K12 and Teacher Education Programs

	CA	CO	GA	IA	NJ	PA	VA	WI
K-12 students 1. Content standards/objectives required in a specific course(s)			Yes – K-8: part of social studies HS: part of Econ.					
2. Content standards/objectives required—no specific course				Yes Personal Finance concepts are a part of 21st century skills 2008	Yes *Social Studies (2004) and FCS (2002)		Yes (MS/JHS/HS) 2007	Yes
3. Content standards/objectives developed but not required						Yes Pers. Finance concepts part of FCE Standards		Yes (adopted 2006)
4. Require student testing			Yes				Yes	
5. No content standards/objectives developed	Yes	Yes						
6. Required student testing			Yes				Yes	
Teacher Education Programs Teacher Education students in Career & Technical Education required to complete course(s) in personal/family finance	Yes – FCS—(Cons. Education) Bus Ed—(Finance)	Yes – FCS – 6 semester credits-Resource Mgmt/ Finance		Yes FCS (Consumer Ed) Bus. Ed. (financial literacy)			Yes (FCS—6 credits) 2007	
State Teacher Education program guidelines for teaching social studies & economics include knowledge/skills in Personal Finance						Yes 2001		Yes—Adopted 2001
State Teacher Education program guidelines for						Yes 2001		Yes—Adopted 2006

* The economics content standards in social studies consist of 3 themes: Economic Literacy, Economics & Society, & Personal Finance Management.

	CA	CO	GA	IA	NJ	PA	VA	WI
teaching Business Info/Technology include knowledge/ skills in Personal Finance								
State Teacher Education program guidelines for teaching Marketing Ed. Includes knowledge/skills in Personal Finance								Yes— Adopted 2000
State Teacher Education program guidelines for teaching Family/Consumer Ed includes knowledge/skills in Personal Finance						Yes 2001		Yes— Adopted 2007

APPENDIX E
K-12 TEACHER SURVEY

Financial Literacy Education Survey

WELCOME TO THE FINANCIAL LITERACY EDUCATON SURVEY!!

It should only take about 15 minutes for you to complete. Thank you in advance for your participation.

1. Are you currently a K-12 teacher?
O Yes
O No

Thank you. This survey is intended for K-12 teachers.
If you are interested in this project on financial literacy, please see our website:
http://tntfl.org

DIRECTIONS:
For each question, click in the appropriate box or enter the appropriate text. If you need to stop before you have completed the survey, you may simply close the browser and start where you left off at a later time. To be sure all the information is saved, click on the "NEXT" button on the bottom of the page prior to closing the browser.
For a definition of financial literacy, click here or where the term appears in color.

2. Indicate your gender:
O Male
O Female

3. Are you:
O American Indian or Alaskan Native
O Asian
O Black or African-American
O Hispanic or Latino
O Native Hawaiian or Other Pacific Islanders
O White

4. In what year were you born?

5. What is your marital status?
O Married
O Living with a partner or significant other
O Separated or divorced
O Widowed
O Never Married

6. Do you have children? (Check all that apply)
O Under 5
O 6-17
O 18-25
O Over 25
O No children

7. Who is mainly responsible for financial management in your household?
O l am
O My spouse/partner
O I share it with my spouse/partner
O Other: e.g., financial planner, other family member(s)

8. Check the highest degree you have completed thus far.
O Bachelor's
O Master's
O Doctorate
O Other, please specify.

9. Indicate the grade level(s) that you teach. (Check all that apply).
O PreK-2
O 3-5
O 6-8
O 9-12

10. This school year what is your main teaching assignment field at your current school? (Your main assignment is the field in which you teach the most classes).

Place appropriate code in box. Click Teaching Assignment Codes.

11. How many years have you taught at the K-12 level prior to September, 2007?

12. Give the state in which your current school is located.

13. What is the approximate size of the city/town in which your school is located?
O 500,000 or more
O 200,000 - 499,000
O 50,000 - 199,000
O 2,500 - 49,000
O Less than 2,500

14. How many students are enrolled in your school?
O 1,000 or more
O 500-999
O 101-499

O under 100

15. Indicate whether you have completed college/university courses for credit with the following titles or comparable content. Include both semester and quarter hour courses, whether graduate or undergraduate. Check all that apply.
□ Macro/Microeconomics
□ Consumer Economics
□ Consumer Education
□ Personal/Consumer Finance
□ Family Economics
□ Consumers and the Market
□ Family Resource Management
□ Risk and Insurance
□ Finance and Investments
□ Methods of Teaching Personal Finance
□ Other personal finance related courses, please specify.

16. If you checked one or more of the courses in the previous question, indicate the year in which you most recently completed a course.

17. In the past three years, have you attended a non-credit workshop on the teaching of financial literacy offered by a: (Check all that apply)
□ College or University
□ State or National Professional Organization
□ State Educational Agency
□ School District
□ None
□ Other, please specify.

18. In the past three years, have you attended any other non-credit workshop dealing with financial literacy subject matter offered by a: (Check all that apply)
□ Professional Organization
□ Financial Planner
□ Religious Organization
□ School District
□ Financial Institution
□ Non-school District Employer
□ None
□ Other, please specify.

19. What is the total amount of time you have spent on professional development in financial literacy or the teaching of financial literacy in the last 3 years? In the last 12 months? (Include attendance at professional meetings, workshops, and conferences on this topic, but do not include formal courses for which you received college/university credit or time spent providing professional development for other teachers).
None

Less than 5 days
6-10 days
More than 10 days
Days in last 3 years
Days in last 12 months

20. Have you taught financial literacy concepts:
Check all that apply
□ Yes, in a separate course required of all students
□ Yes, in a separate elective course
□ Yes, integrated into a course(s) that you regularly teach
□ Yes, in a non-credit course
□ No, have not included financial literacy in my teaching

21. If you have taught financial literacy concepts, how many years have you done so?

22. In the past three years, have you participated in any of the following activities related to financial literacy or the
teaching of financial literacy?
Check all that apply.
□ Served on a school or district financial literacy committee?
□ Served on a state or national financial literacy committee?
□ Served on a committee to initiate a new financial literacy course requirement in your school district?
□ Revised a course or a curriculum in your subject area to include financial literacy content
□ Taught financial literacy workshops, seminars, or courses in your community?
□ Received state or national grants or awards for teaching financial literacy?
□ Initiated a school-based course related to financial literacy?
□ Mentored other teachers that were interested in beginning to teach financial literacy?
□ None of the above
□ Indicate other activities you have engaged in to advance financial literacy. Please specify.

If you were to (or have) developed a course in the teaching of financial literacy, how competent would you feel without further training to teach the following topics (these are drawn from the Jump$tart Coalition for Personal Financial Literacy, 2007)?
23. Financial Responsibility and Decision Making
FOR EXAMPLE,
Take responsibility for personal financial decisions.
Find and evaluate financial information from a variety of sources.
Make financial decisions by systematically considering alternatives and consequences.
O Not Very Competent O Adequately Competent O Very Competent

24. Income and Careers
FOR EXAMPLE,

Explore other career options.
Identify sources of personal income.
Describe factors affecting take-home pay.
O Not Very Competent O Adequately Competent O Very Competent

25. Planning and Money Management
FOR EXAMPLE,
Develop a plan for spending and saving.
Develop a system for keeping and using financial records.
Develop a personal financial plan.
O Not Very Competent O Adequately Competent O Very Competent

26. Credit and Debt
FOR EXAMPLE,
Identify the costs and benefits of various types of credit.
Explain the purpose of a credit record and identify borrowers' credit report rights.
Describe ways to avoid or correct debt problems.
O Not Very Competent O Adequately Competent O Very Competent

27. Risk Management and Insurance
FOR EXAMPLE,
Identify common types of risks and basic risk management.
Explain the purpose and importance of property and liability insurance.
Explain the purpose and importance of health, disability and life insurance.
O Not Very Competent '. Adequately Competent Very Competent

APPENDIX F
TEACHER EDUCATION STUDENT SURVEY

Financial Literacy Survey

WELCOME TO THE FINANCIAL LITERACY SURVEY!

It should take only about 15 minutes for you to complete. Thank you in advance for your participation.

1. Are you currently enrolled in a teacher preparation program?
O Yes
O no

Thank you. This survey is intended for college or university students enrolled in a teacher preparation program. If you are interested in this project on financial literacy, please see our website: http://tntfl.org

Directions:
For each question, click in the appropriate box or enter the appropriate text. If you need to stop before you have completed the survey, you may simply close the browser and start where you left off at a later time. To be sure all the information is saved, click on the "NEXT" button on the bottom of the page prior to closing the browser.

For a definition of financial literacy, click here or where the term appears in color.

2. Indicate your gender:
O Male
O Female

3. Are you:
O American Indian or Alaskan Native
O Asian
O Black or African-American
O Hispanic or Latino
O Native Hawaiian or Other Pacific Islanders
O White

4. In what year were you born?

5. What is your marital status?
O Married
O Living with a partner or significant other
O Separated or divorced
O Widowed

O Never married

6. Do you have children? (Check all that apply)
 Under 5
 6-17
 18-25
 Over 25
 No children

7. Who is mainly responsible for financial management in your household?
O l am
O My spouse/partner
O I share it with my spouse/partner
O Parents
O Other: e.g., financial planner, other family member(s)

8. What state did you live in when you graduated from high school?

9. Please indicate the state in which your teacher education program is located.

10. Check the degree you are currently pursuing.
O Bachelor's
O Master's
O No Degree/Certification Only
O Other, please specify.

11. Check the highest degree/diploma you have completed thus far.
O High School
O Associate Degree
O Bachelor's
O Master's
O Doctorate
O Other, please specify.

12. Indicate your declared Major(s) and Minor(s) in your teacher education program by placing the appropriate code in box. Click Major & Minor Codes.
Major(s) Minor(s)

13. Indicate whether you have completed college/university courses for credit with the following titles or comparable content. Include both semester and quarter hour courses, whether graduate or undergraduate. Check all that apply.
 Macro/Microeconomics
 Consumer Economics
 Consumer Education
 Personal/Consumer Finance
 Family Economics

□ Consumers and the Market
□ Family Resource Management
□ Risk and Insurance
□ Finance and Investments
□ Methods of Teaching Personal Finance
□ Other personal finance related courses, please specify.

14. Did you take a separate course relating to financial literacy when you were in high school?
O Yes
O No

15. In the past three years, have you attended a non-credit workshop on the teaching of financial literacy offered by a: (Check all that apply)
□ College or University
□ State or National Professional Organization
□ State Educational Agency
□ School District
□ None
□ Other, please specify.

16. In the past three years, have you attended any other non-credit workshop dealing with financial literacy subject " matter offered by a: (Check all that apply)
□ Professional Organization
□ Financial Planner
□ Religious Organization
□ School District
□ Financial Institution
□ Non-School District Employer
□ None
□ Other, please specify.

17. As a teacher education student, have you completed: (Check all that apply)
□ Nearly all of the subject matter course requirements?
□ Pre-student teaching field experiences?
□ Methods and curriculum courses?
□ Student teaching?

18. In the past three years, have you participated in any of the following activities related to financial literacy or the teaching of financial literacy? (Check all that apply)
□ Developed lesson plans or curriculum materials related to financial literacy.
□ Taught financial literacy lessons as a part of a practicum or student teaching experience.
□ Worked with a youth group or other community-based group to plan a program in a school/community related to financial literacy.

□ Gave a presentation relating to financial literacy to a community-based group.
□ None of the above.
□ Indicate other activities you have engaged in to advance financial literacy. Please specify.

If you were to (or have) developed a course on the teaching of financial literacy, how competent would you feel without further training to teach the following topics (these are drawn from the Jump$tart Coalition for Personal Financial Literacy, 2007)?

19. Financial Responsibility and Decision Making
FOR EXAMPLE,
Take responsibility for personal financial decisions.
Find and evaluate financial information from a variety of sources.
Make financial decisions by systematically considering alternatives and consequences.
O Not Very Competent O Adequately Competent O Very Competent

20. Income and Careers
FOR EXAMPLE,
Explore other career options.
Identify sources of personal income.
Describe factors affecting take-home pay.
O Not Very Competent O Adequately Competent O Very Competent

21. Planning and Money Management
FOR EXAMPLE,
Develop a plan for spending and saving.
Develop a system for keeping and using financial records.
Develop a personal financial plan.
O Not Very Competent O Adequately Competent O Very Competent

22. Credit and Debt
FOR EXAMPLE,
Identify the costs and benefits of various types of credit.
Explain the purpose of a credit record and identify borrowers' credit report rights.
Describe ways to avoid or correct debt problems.
O Not Very Competent O Adequately Competent O Very Competent

23. Risk Management and Insurance
FOR EXAMPLE,
Identify common types of risks and basic risk management.
Explain the purpose and importance of property and liability insurance.
Explain the purpose and importance of health, disability and life insurance.
O Not Very Competent O Adequately Competent O Very Competent

24. Saving and Investing
FOR EXAMPLE,

Discuss how saving contributes to financial well-being.
Explain how investing builds wealth and helps meet financial goals.
Describe how to buy and sell investments.
O Not Very Competent O Adequately Competent O Very Competent

25. Considering the students you are preparing to teach, indicate how well qualified you currently feel to do each of the following regarding learners:

	Not Well Qualified	Adequately Qualified	Very Well
Financial Literacy Definition.	O	O	O
Assess students' existing understanding of financial literacy concepts.	O	O	O
Determine how social and cultural background relates to financial understanding.	O	O	O
Assess the degree to which instruction impacts students' financial behaviors.			

26. Considering the students you are preparing to teach, indicate how well qualified you feel to do each of the following regarding educational aims:

	Not Well	Adequately Qualified	Very Well Qualified	Not Familiar With
Utilize the Jump$tart Coalition standards.	O	O	O	O
Utilize your state financial literacy standards.	O	O	O	O

27. Considering the students you are preparing to teach, indicate how well qualified you feel to do each of the following regarding curriculum and resources:

	Not Well Qualified	Adequately Qualified	Very Well
Integrate financial literacy concepts into your subject matter discipline(s).	O	O	O
Access and use websites and on-line learning resources related to financial literacy.	O	O	O

28. Considering the students you are preparing to teach, indicate how well qualified you feel to do each of the following regarding instructional strategies:

	Not Well Qualified	Adequately Qualified	Very Well
Modify financial literacy methods and content for students with varying ability levels.	O	O	O
Develop examples and case studies to explain financial literacy concepts.	O	O	O

29. Please provide your opinion about each of the following statements. Financial Literacy Definition.

	Strongly Disagre	Moderately Agree	Strongl y Agree
	O	O	O
Financial literacy concepts are too complicated for elementary school children.	O	O	O
Students should either be required to take a financial literacy course or pass a financial literacy test prior to graduation from high school.	O	O	O
I think financial literacy concepts and courses are most effective if the teacher collaborates with members of the local financial services industry.	O	O	O
I would encourage parents to be involved in school classes dealing with financial literacy concepts when/if I taught them.	O	O	O

I would be open to team teaching with another teacher lessons and/or courses related to financial literacy.

Financial literacy should address the issue of financial gifts and a sense of responsibility to the broader community.

30. Which of these are major sources of worry or concern? Check all that apply.

- Paying off my college/university loans.
- My level of credit card debt.
- Covering the cost of my continuing education requirements.
- Not having sufficient income to meet my needs
- Knowing whether I will have enough money for retirement.
- Paying for my children's college/university education.
- Whether I am getting the best rate when buying on credit.
- Whether I am making the best use of employer-sponsored savings or investment plans.
- Whether I am taking advantage of all the tax laws that my benefit me.
- Determining ways to supplement my income as a teacher.
- Knowing which sources of financial information to trust.
- Finding the best property and automobile insurance products to meet my needs.
- Understanding and selecting personal/family health insurance coverage.
- Understanding and selecting long-term care insurance.
- Whether I am using the best strategies for investing my money.
- Understanding the role of social security in my likely retirement income.
- Understanding insurance options and costs during retirement (e.g., private insurance, employer-sponsored insurance, Medicare).
- Being able to develop and follow a realistic spending plan.
- Developing an estate plan (e.g., wills, trusts, gifts).
- Understanding and selecting the most appropriate life insurance option(s) for me and my family.
- Having funds to buy a home or meet my mortgage payments.

31. Please indicate whether you have ever done the following:
Financial Literacy Definition.

	Yes	No
Purchased real estate property for personal use.	O	O
Purchased real estate property for investment purposes.	O	O
Contributed to a voluntary employer-sponsored retirement account.	O	O
Contributed to another retirement plan such as an IRA.	O	O
Created a legal financial will and/or an estate plan.	O	O
Purchased stocks, bonds, and/or mutual funds apart from retirement accounts.	O	O
Developed a financial recordkeeping system.	O	O
Taken out an initial mortgage.	O	O
Refinanced a mortgage or home loan.	O	O
Consulted a professional financial planner.	O	O
Applied for a bank or credit union loan other than a mortgage.	O	O
Often/always planned and set goals for your financial future.	O	O
Consulted a benefits specialist at your place of employment.	O	O
Attended a workplace presentation on a financial topic.	O	O

32. Please indicate whether you have ever done the following in the last year.

	Yes	No
Used a written spending plan.	O	O
Reviewed your credit report.	O	O
Prepared your own personal income tax.	O	O
Reconciled your checkbook every month.	O	O
Usually paid credit card balances in full each month.	O	O
Usually paid all other bills on time.	O	O

Maintained a fund for unexpected expenses. O
O
Saved or invested money out of each paycheck. O
O
Calculated your net worth. O
O
Read about money management. O
O

33. To what extent do you believe financial literacy topics should be incorporated into the subject matter area you
are preparing to teach?
O Not at all
O To a limited degree
O Should be a major part of my subject matter area

34. Where in the school curriculum do you think financial literacy belongs? " (Check all that apply)
☐ PreK-2
☐ 3-5
☐ 6-8
☐ 9-12

35. How important do you feel it is for teacher education students in your subject matter area to be prepared to teach financial literacy?
O Not important at all
O Somewhat Important
O Very Important

36. How likely would you be to attend additional education (beyond what is required in your program) on teaching financial literacy?
O Not likely at all
O Somewhat likely
O Very likely

37. Please indicate if you would like to participate in a drawing for a $200 gift certificate redeemable at nationwide retailer Best Buy (www.BestBuy.com).
O Yes
O No

APPENDIX G
TEACHER EDUCATION FACULTY SURVEY

Financial Education Survey

WELCOME TO THE FINANCIAL EDUCATION SURVEY!

It should only take you about 15 minutes to complete. Thank you in advance for your participation.

1. Are you currently a college or university faculty member with responsibilities for the preparation of K-12 teachers?

O Yes
O No

Thank you. This survey is intended for college or university faculty members with responsibilities for the preparation of K-12 teachers.
If you are interested in this project on financial literacy, please see our website:
http://tntfl.org
DIRECTIONS:
For each question, click in the appropriate box or enter the appropriate text. If you need to stop before you have completed the survey, you may simply close the browser and start where you left off at a later time. To be sure all the information is saved, click on the "NEXT" button on the bottom of the page prior to closing the browser.
For a definition of financial literacy, click here or where the term appears in color.

2. Indicate your gender:

O Male
O Female

3. Are you:

O American Indian or Alaskan Native
O Asian
O Black or African-American
O Hispanic or Latino
O Native Hawaiian or Other Pacific Islanders
O White

4. In what year were you born?

5. What is your marital status?

O Married
O Living with a partner or significant other
O Separated or divorced
O Widowed
O Never Married

6. Who is mainly responsible for financial management in your household?
O l am
O My spouse/partner
O I share it with my spouse/partner
O Other: e.g., financial planner, other family member(s)

7. Check the highest degree you currently have.
O Bachelor's degree
O Master's degree
O Doctoral degree
O Other, please specify.

8. How many years did you teach at the K-12 level?

9. How many years have you been a college or university faculty member with responsibilities for the preparation of K-12 teachers?

10. On September 1, 2007, what was your academic rank, title, or position?
O Professor
O Associate Professor
O Assistant Professor
O Instructor
O Lecturer
O Other (e.g., Administrative, Adjunct, Emeritus). Please specify.

11. Please indicate the primary GENERAL EDUCATION focus of your academic appointment. (Check all that apply).
(Subject matter specific programs are on the next screen).

 Adult and Continuing Education
 Curriculum and Instruction
 Curriculum Theory and Research
 Early Childhood Education
 Educational Assessment
 Educational Communication & Technology
 Educational Leadership
 Educational Policy Studies
 Educational Psychology
 Educational Research
 Elementary Education
 Guidance and Counseling
 Higher Education Administration
 International Studies in Curriculum & Research
 Middle Childhood-Early Adolescent

 Multicultural Education
 School Finance
 School Law
 Secondary Education
 Special Education
 Other, please specify.

12. Please indicate the primary SUBJECT MATTER focus of your academic appointment. (Check all that apply).

 Agricultural Education
 Art Education
 Bilingual Education
 Business Education
 Career and Technical Education
 Communicative Sciences & Disorders
 English as a Second Language
 English Education
 Family and Consumer Sciences Education
 Health Education
 Literacy Studies
 Marketing Education
 Mathematics Education
 Music Education
 Physical Education/Kinesiology
 Science Education
 Social Studies Education
 Technical Education
 World Languages Education
 Other, please specify.

13. Have you taught financial literacy to students at the K-12 level? " Check all that apply.

 Yes, in a separate course
 Yes, integrated into a course(s) in your subject matter area
 Yes, integrated into more than one subject matter area
 No, have not included financial literacy in my teaching

14. Have you taught financial literacy to students at the college/university level? Check all that apply.

 Yes, in a separate course required of all students
 Yes, in a separate elective course
 Yes, integrated into a course(s) that you regularly teach
 Yes, in a non-credit course
 No, have not included financial literacy in my teaching

15. In the past three years, as a college/university faculty member, have you participated in any of the following activities related to financial literacy or the teaching of financial literacy? Check all that apply.

 Served on a school or district financial literacy education committee?
 Served on a state or national financial literacy education committee?
 Served on a committee to initiate a new financial literacy requirement in your program?
 Revised a course or curriculum in your subject area to include financial literacy content?
 Taught financial literacy workshops, seminars, or courses in your community?
 Received a grant or award to support financial literacy teacher education?
 Conducted research in financial literacy education?
 None of the above
 Indicate other activities you have engaged in to advance financial literacy. Please specify.

If you were to (or have) developed a course on the teaching of financial literacy, how competent would you feel without further training to teach the following topics (these are drawn from the Jump$tart Coalition for Personal Financial Literacy, 2007)?

16. Financial Responsibility and Decision Making
FOR EXAMPLE,
Take responsibility for personal financial decisions.
Find and evaluate financial information from a variety of sources.
Make financial decisions by systematically considering alternatives and consequences.
O Not Very Competent O Adequately Competent O Very Competent

17. Income and Careers
FOR EXAMPLE,
Explore other career options.
Identify sources of personal income.
Describe factors affecting take-home pay.
O Not Very Competent O Adequately Competent O Very Competent

18. Planning and Money Management
FOR example,
Develop a plan for spending and saving.
Develop a system for keeping and using financial records.
Develop a personal financial plan.
O Not Very Competent O Adequately Competent O Very Competent

19. Credit and Debt
FOR EXAMPLE,
Identify the costs and benefits of various types of credit.
Explain the purpose of a credit record and identify borrowers' credit report rights.
Describe ways to avoid or correct debt problems.

O Not Very Competent O Adequately Competent O Very Competent

20. Risk Management and Insurance
FOR EXAMPLE,
Identify common types of risks and basic risk management.
Explain the purpose and importance of property and liability insurance.
Explain the purpose and importance of health, disability and life insurance.
O Not Very Competent O Adequately Competent O Very Competent

21. Saving and Investing
FOR EXAMPLE,
Discuss how saving contributes to financial well-being.
Explain how investing builds wealth and helps meet financial goals.
Describe how to buy and sell investments.
O Not Very Competent O Adequately Competent O Very Competent

22. Considering the students you currently teach, indicate how well qualified you feel to do each of the following regarding learners: Financial Literacy Definition

	Not Well Qualified	Adequately Qualified	Very Well
Assess students' existing understanding of financial literacy concepts.	O	O	O
Determine how social and cultural background relates to financial understanding.	O	O	O
Assess the degree to which instruction impacts students' financial behaviors.	O	O	O

23. Considering the students you currently teach, indicate how well qualified you feel to do each of the following regarding educational aims:

	Not Well Qualifie	Adequately Qualified	Very Well Qualified	Not Familiar with
Utilize the Jump$tart Coalition standards.	O	O	O	O
Utilize your state financial literacy standards.	O	O	O	O

24. Considering the students you currently teach, indicate how well qualified you feel to do each of the following regarding curriculum and resources:

	Not Well Qualified	Adequately Qualified	Very Well
Integrate financial literacy concepts into teacher education classes you teach.	O	O	O
Access and use websites and on-line learning resources related to financial literacy.	O	O	O

25. Considering the students you currently teach, indicate how well qualified you feel to do each of the following regarding instructional strategies:

	Not Well Qualified	Adequately Qualified	Very Well
Modify financial literacy methods and content for students with varying ability levels.	O	O	O
Develop examples and case studies to explain financial literacy concepts.	O	O	O

26. Please provide your opinion about each of the following statements. Financial Literacy Definition

	Strongly Disagree	Moderately Agree	Strongly Agree
Financial literacy concepts are too complicated for elementary school children.	O	O	O
Students should either be required to take a financial literacy course or pass a financial literacy test prior to graduation from high school.	O	O	O
I think financial literacy concepts and courses are most effective if the teacher collaborates with members of the local financial services industry.	O	O	O
I would encourage parents to be involved in school classes dealing with financial literacy concepts when/if I taught them.	O	O	O
I would be open to team teaching with another faculty member lessons and/or courses related to financial literacy.	O	O	O
Financial literacy should address the issue of financial gifts and a sense of responsibility to the broader community.	O	O	O

27. To what extent do you believe financial literacy topics should be incorporated into your subject matter area?

O Not at all
O To a limited degree
O Should be a major part of what I teach

28. Where in the school curriculum do you think financial literacy belongs? Check all that apply.

☐ PreK-2
☐ 3-5
☐ 6-8
☐ 9-12

29. How important do you feel it is for teacher education students in your subject matter area to be prepared to teach financial literacy?

O Not important at all

O Somewhat important
O Very important

30. To what extent are teachers in your subject matter area prepared to teach financial literacy?
O Not very prepared at all
O Somewhat prepared
O Very well prepared

31. Please indicate if you wold like to participate in a drawing for a $200 gift certificate redeemable at nationwide retailer Best Buy (www.BestBuy.com)?
O Yes O No