Promising Learning Strategies, Interventions, and Delivery Methods in Financial Literacy Education:

What techniques, venues, tactics, mechanisms, etc., show the most promise to promote and achieve financial well-being?

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1. Introduction

Research conducted in the past 25 years has offered a great deal of information about the financial well-being and aptitude of Americans. In this report, we highlight key elements of that research to offer practitioners and policymakers insights into what works, what does not, and what needs more attention in the field of financial education.

We first offer an overview and an accounting of the array of financial education initiatives currently in place. We start with an analysis of the effectiveness of a selection of financial education programs: those targeted at students (high school and college), employees (workplace programs), and at-risk individuals, with some commentary on when programs seem most effective, for whom they’re most effective, and where more evaluation is needed. Evidence from this discussion suggests significant promise exists for financial education, but the promise is not yet fully realized.

With this in mind, we turn to an in-depth look at financial education in the workplace with a focus on key junctures in the life cycle of adult workers—at the point of entering the workforce and at the point of transitioning to retirement. Discussion broadens to the subject of adult education and effective theoretical frameworks for use in the development of adult financial education programs. This is followed by discussion of the role of informal learning and its impact on people’s knowledge and behavior. A brief concluding section offers suggestions and comments on how to improve the effectiveness of financial education.

1.1 Financial Education: An Overview

In this section, we present an overview of the wide range of financial education programs aimed at improving Americans’ financial literacy, and we assess their relative effectiveness. In
this review we use the definition of financial education offered by the international Organisation for Economic Co-operation and Development (2005)\textsuperscript{1}:

Financial education is the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.

Financial education can include any program or process, be it formal or informal, that addresses the knowledge, attitudes, and/or behavior of an individual toward financial topics and concepts. Unquestionably, this wide range of potential treatments and outcomes makes identification of effective financial education programs more challenging. However, the link between formal knowledge and real economic outcomes is now well established (see Lusardi & Mitchell, 2007 a, b, and Lusardi, 2009 for a review) and we can consider education programs to be effective when they result in measurable gains in financial knowledge or in better financial decision making.

\textbf{1.2 The Current Array of Financial Education Initiatives}

There is no shortage of programs aimed at improving Americans’ financial literacy, and much of the activity in financial education is relatively recent. In a 2004 Government

Accountability Office report, the Comptroller General reported that “an estimated 20 different federal agencies operate about 30 different programs or initiatives related to financial literacy” (GAO-05-93SP 2004, p. 3). A Fannie Mae Foundation report reviewing 90 financial education programs offered in communities and workplaces showed that 65 percent were launched in the 1990s. Of these programs, 75 percent began in the late 1990s or in 2000 (Vitt et al., 2000). In Spring 2003, the Federal Reserve Bank of Cleveland reported on the financial education efforts in the Fourth District, which includes Ohio, eastern Kentucky, western Pennsylvania, and northern West Virginia. The study found that almost 50 percent of the programs were five years old or less, whereas just over 10 percent of the programs had been around for 20 years or more (Hopley, 2003).

A host of public and private entities engage in personal financial education. According to Vitt et al. (2000), financial education programs summarized in the Fannie Mae report include:

1. 29 community organization programs
2. 24 Cooperative Extension Service programs
3. 18 business 18 programs
4. Eight faith-based organization programs
5. Seven community college programs
6. Four U.S. military programs

Of 164 community development corporations; social service agencies; local, state, and federal government agencies; faith-based organizations; foundations; and schools or universities responding to a Federal Reserve Bank of Cleveland survey, 32 percent delivered a financial education program, 12 percent funded a financial education program, and 2 percent did both (Hopley, 2003). Commercial banks also commonly engage in financial education efforts. A
study by the Consumer Bankers Association (2002) found that 66 percent of the 68 retail banks
surveyed were conducting financial education programs and 97 percent participated in some
form of financial education program either directly or through partnerships.

Unified efforts to address financial literacy and education came with the Financial
Literacy and Education Improvement Act, passed under Title V of the Fair and Accurate Credit
Transactions Act of 2003. Specifically, the Financial Literacy and Education Commission was
created. The commission is made up of 20 federal agencies with the goal of “coordinating federal
efforts and developing a national strategy to promote financial literacy.” Increased interest in
financial education culminated in the establishment of the Office of Financial Education by the
Treasury Department, announced in May 2002.

In terms of national financial education, efforts vary by the setting, audience, and subject
matter (Braunstein & Welch, 2002; Todd, 2002), with organizations and institutions frequently
partnering to deliver financial education. These efforts can be organized into three broad
categories based on themes or topics in personal finance. The programs include:

- Programs directed at improving financial literacy by broadly addressing personal
  finance topics, such as budgeting, saving, and credit management. In this category,
  there are several wide-ranging financial education initiatives aimed at school-age
  students.
- Programs that give specific training in retirement and savings (generally offered by
  employers).
- Programs addressing home buying, home ownership, and debt.

The energy and resources devoted to improving American financial literacy through
financial education programs cannot be understated and continues to build. As evidenced in the
brief review above, there is no shortage of initiatives, campaigns, and partnerships undertaking financial education as a mission. With this fervor of financial education delivery, the important question and impending challenge to educators, researchers, and policymakers is discerning the effectiveness of these efforts.

2. Impacts of Targeted Financial Education Programs

Evidence demonstrating the effect of financial education programs appears to be mixed and must be regarded with “cautious optimism” (Todd, 2002). However, much of the recent work in financial education has established causality between financial knowledge and financial behavior (Lusardi & Mitchell, 2007b; Martin, 2007), adding urgency to the task of identifying education programs that work and guiding consumers to these best practices in education.

In an academic setting, the most visible assessment of learning outcomes is conducted by the Jump$tart Coalition for Personal Financial Literacy (Mandell, 2008). The national financial literacy examination is administered biennially. The most recent exam, administered in 2008 to high school seniors, found that students answered only 48.3 percent of basic personal finance questions correctly, the lowest level in six biennial surveys. Moreover, the 2005–2006 survey found that students who took a high school personal finance course tended to do worse on the test than students who did not take a course (Mandell, 2006). An evaluation of the National Endowment for Financial Education High School Financial Planning Program (HSFPP) in 2003–2004 showed more promising results in terms of the effectiveness of financial education. Evaluations at the end of classroom curriculum use and three months after completion of the curriculum showed that as little as 10 hours of exposure to the curriculum led to significant improvement in financial behavior and increased understanding of money management (Danes, 2004). A similar NEFE evaluation was conducted in 1997–1998 and found increases in
knowledge, self-efficacy, and savings rates attributable to the program (Danes, Huddleston-Casas, & Boyce, 1999).

Examining both college and high school education, a study of university alumni shows minimal (even trending toward negative) impact of personal financial education delivered in high schools on learning outcomes (Peng et al., 2007). More promising results are found for college level courses. Peng et al. (2007) argue that critical financial outcomes (namely credit card use and paying bills) are more apparent in the lives of college students than high school students, leading to stronger links between classroom information and personal financial practices. These results allude to the importance of context and motivation in the financial learning process.

Limited evaluation had been conducted in terms of the effectiveness of college level financial education. Mandell (2008) demonstrates much higher levels of general financial literacy among college students than high school students, further demonstrating that motivation is critical in learning personal finance. Chen and Volpe (1998) surveyed students from 13 different campuses to study financial literacy levels and financial decision making. They found that financial decisions were highly influenced by financial knowledge. Approximately 89 percent of students with higher levels of financial literacy made good spending decisions in a hypothetical situation whereas only 68 percent of students with lower levels of financial knowledge made the same correct choices. Bowen and Jones (2006) used a pretest-posttest design to determine the impact of an educational intervention regarding credit card and money attitudes among freshmen and sophomores. Based on a two-session intervention, significant improvement occurred in overall credit card knowledge scores and a majority of students changed, or planned to change, their credit card usage in a positive manner.
Relative to financial education in educational settings, studies of workplace financial education are more prevalent and somewhat more convincing (Todd, 2002). It’s common for studies to find improved savings rates due to workplace financial education (Bernheim & Garrett, 2003; Todd, 2002). Participation in and contributions to voluntary savings was higher among employees who participated in retirement seminars offered in the workplace, although the effect was stronger among non-highly compensated workers than among highly compensated employees (Bayer, Bernheim, & Scholz, 1996). Nonetheless, in an experiment among university employees on the decision to participate in retirement information sessions, Duflo and Saez (2003) conclude that social pressure and financial incentives outweigh the value of the information itself. Bernheim and Garrett (2003) found median savings rates to be 22 percent higher for individuals whose employers offered financial education. This study accounted for savings that was separate from workplace savings and retirement plans. A major shortcoming of previous program evaluations has been not distinguishing between workplace (for example, retirement plans) and household saving behavior (Todd, 2002).

Anderson, Uttley, and Kerbel (2006) tout the rare use of a pretest, posttest, long-term follow-up approach to evaluating the impact of financial education delivered in the workplace on 28 specific actions related to personal finances. For all actions, ranging from writing down financial goals to assessing investment asset allocation, program participants report improvements. Perhaps the most significant contribution of the Anderson et al. study is the simplicity with which the outcomes were measured (action/no action) and analyzed (percent of participants taking action before and after education).

The evidence from targeted programs such as homeownership education or savings programs mostly supports the positive role of financial education. For example, Rutgers
Cooperative Extension conducted a six-month follow-up study of the monetary impact of a program called Money 2000. Although the results were not compared with a control group, participants increased their savings by approximately $4,500 and reduced their debt by $2,600 (O’Neill, 2001).

Among Individual Development Account program participants, Shockey and Seiling (2004) used a pretest-posttest approach to program evaluation within a stage-of-change measure-of-program impact. From a community-based sample from four states (Hawaii, Indiana, Missouri, and Ohio), they show that financial education can be linked to improved confidence with finances, which then can be linked to behavioral change (progression from just thinking about doing something to actually taking action). Notable in their approach is the use of a progression through stages as the key outcome of financial education, instead of reported knowledge gains or changes in financial outcomes.

With respect to consumer debt, the effectiveness of counseling and education appears to be promising. A National Foundation for Credit Counseling report compared the credit performance over a three-year period, from 1997 to 2000, of individuals who received financial counseling to a matched group of non-counseled individuals (Elliehausen, Lundquist, & Staten, 2007). Compared to non-counseled borrowers, more than half of counseled borrowers had improved bank card risk scores and the majority reduced the number of accounts, total debt, and delinquencies (Elliehausen, Lundquist, & Staten, 2007). A study by Freddie Mac demonstrated the effectiveness of counseling mortgage holders. Borrowers who received counseling prior to home purchase, on average, had a 90-day mortgage delinquency rate that was 19 percent lower than non-counseled homeowners (Hirad & Zorn, 2002).
On the surface, a short financial management course required of Chapter 13 debtors appeared to have a strong and positive impact. Course participants had a higher rate of plan completion compared to individuals who did not complete the debtor education program (Braucher, 2001). However, Braucher (2001) cautions that several other factors influenced plan completion, including “delaying full payment of attorneys fees for three years, permitting many low percentage, five-year plans, and use of wage orders to have debtors’ employers pay the trustee directly.” The additional factors meant it was impossible to attribute success solely to the debtor education program.

Addressing the issue of financial literacy and bankruptcy, one study used a quasi-experimental design to compare trained debtors (who received a three-hour financial education class), untrained debtors, and non-debtors in a New York sample (Wiener et al., 2005). After administering a pretest followed by a three-month posttest, the financial education was shown to produce a significant gain in credit card knowledge among trained debtors. In a community-based financial education program for women in Ohio, Fox and Bartholomae (2006) outlined a multi-year evaluation. Though strong program impact is shown in perceived learning, evidence is uncovered of diminishing returns for those who had attended previous financial education programs. The repeat students appear to gain less from continued education—even when targeted at women and their specific financial needs.

Given this more general review of targeted financial education programs, we can say that financial education has potential for being effective—but that this potential is not yet fully realized. We focus now on three areas in which improvements can be made: (1) workplace financial education, (2) theoretical grounding of adult financial education programs in general, and (3) consideration of the importance and role of informal learning in financial education.
3. Workplace Financial Education at Specific Junctures

This section outlines employer-provided educational policies and how they can affect the financial literacy of workers. While enhancing literacy throughout the lifetime is useful, there are two key points during which workers are faced with a series of decisions that will have a major impact on their lifetime well being. These are when workers are initially employed and when they begin the transition from work to retirement. This section of the report focuses on employer policies for newly hired workers and for retirement eligible employees.

3.1 New Hires, Saving Plans, and Required Knowledge

Young workers just entering the labor force must make a series of important consumption and saving decisions. Many are faced with repaying student loans and most face the challenges of supporting families and buying houses. However, if they are to accumulate sufficient resources to finance their retirement years, enrolling in retirement saving plans is essential, especially when the employers match their contributions.

Providing information and help at critical junctures, such as when employees are first hired, can be critically important. Lusardi, Keller, and Keller (2008) devised a planning aid for distribution to new hires during employee orientation. The planning aid displays several critical features. First, it breaks down the process of enrolling in supplementary pensions into several small steps, describing to participants what they need to do to enroll online. Moreover, it provides several pieces of information to help overcome barriers to saving, such as describing the low minimum amount of income that employees can contribute (in addition to the maximum) and indicating the default fund that the employer has chosen for them (a life-cycle fund). Finally, the planning aid contains pictures and messages designed to motivate participants to save.
The planning aid was designed after thorough data collection. The researchers devised a survey asking explicitly about barriers to saving, sources of financial advice, levels of financial knowledge, and attractive features of a pension plan. Moreover, they conducted focus groups and in-depth interviews—with both employees and human resources administrators—to shed more light on the impediments to saving. These data collection methods, which are common in the field of marketing, are well suited to capturing the wide heterogeneity that exists in saving decisions. Even though the sample is small and hardly representative of the U.S. population, it shows important findings. For example, many employees claim they consult only family and friends when making saving decisions. Moreover, close to 40 percent claim they do not have enough knowledge about finance/investing, and close to 20 percent claim they do not know where to start. Given this evidence, it is not surprising that the program was so successful—contribution rates to supplementary pensions tripled after the introduction of the planning aid (Lusardi, Keller and Keller, 2008).

This program shares several features with other programs. First, the start of a new job makes people think about saving (often because they have to make decisions about their pension). Many people do not think about funding their retirement, even at an advanced age, and it may be very important to exploit those “teachable moments.” Second, to be effective, programs have to recognize the many differences that exist among individuals, not only in terms of preferences and economic circumstances, but also in levels of knowledge, financial sophistication, and ability to carry though with plans. In other words, relying on one-size-fits-all principles can lead to ineffective programs.

In an ongoing project, Clark and Morrill (2010) examine initial enrollment rates in retirement saving plans as a function of how individuals are given this information (online, hard
copies, face to face, etc.) and whether the employer provides general financial education in conjunction with the plan information. For example, do employers use worksheets showing the importance of beginning to save early in one’s career and the importance of interest compounding in asset accumulation? Another aspect of this process is whether there is any follow-up discussion with workers who do not initially enroll in a plan. Some employers send enrollment reminder cards while others have face-to-face discussions about the importance of retirement saving. Sometimes these discussions take place during annual performance reviews. According to their initial estimates, Clark and Morrill (2010) find that providing help and information to newly hired workers can help them in their decision making.

3.2 Retirement Decisions and Knowledge Requirements

In the next decade, millions of baby boomers will make the transition from full-time work to complete retirement. As older workers approach retirement, they must make a series of important decisions, some of which are irreversible. These choices will determine, in part, the level of income in retirement, the sensitivity of income to economic fluctuations, and the ability to maintain their consumption level throughout retirement. Individuals will need to rely on their financial literacy and knowledge about retirement programs in order to make good retirement decisions. Without accurate information and sufficient financial literacy, individuals will tend to make inappropriate employment and investment choices that could have significant consequences in their retirement years.

The most important decisions facing workers nearing retirement are no longer how to amass additional wealth for retirement. Instead, workers at this stage must focus on how to best use the resources available to them. The limited evidence available suggests that older workers do not have sufficient knowledge or financial literacy to make good decisions about the many
choices surrounding the transition from work to retirement (Gustman & Steinmeier, 2004; Lusardi, 2009). Thus, programs that increase financial literacy and retirement program knowledge can improve retirement decisions and produce better retirement outcomes. In addition, pre-retirement planning seminars can efficiently address the numerous questions and concerns that individuals approaching retirement share, thereby reducing the human resources costs.

Some of the most important questions older workers face are:

1. When to retire from their career jobs?
2. Whether to take a lump sum distribution from a defined benefit pension plan or to accept the annuity option?
3. When to claim Social Security benefits?
4. Whether to annuitize all or part of 401(k) and/or 403(b) account balances?
5. How to manage investments in retirement?

For workers to make optimal choices, they must have an appropriate level of financial literacy, understand financial mathematics, and also have accurate knowledge about employer retirement programs and national retirement programs. While these are different concepts, sufficient knowledge and literacy are both important to achieving a successful retirement. One resource available to some workers is employer-sponsored pre-retirement planning programs. Many large employers offer some type of planning seminars for retirement-eligible employees.

Over the past three years, Clark and Morrill (2010) have monitored the retirement planning programs of seven large national employers. These programs range from half-day to two-day programs and cover a variety of topics, including employer-provided benefits, national retirement programs, asset management, and the retirement transition. Prior to the programs,
workers exhibited a low level of financial literacy and knowledge of retirement plans. Key
parameters of Social Security, Medicare, and pension regulations are based on legislation passed
at different points in time with different objectives. As a result, many alternative ages are
specified in the programs that determine access to retirement income and benefits. While
confusion over these ages is understandable, the retirement income of workers depends on their
knowledge of these ages and the timing of their retirement decisions.

After participation in educational programs, workers show significant increases in
financial literacy and knowledge of retirement programs. It is also worth noting that the gains in
participant knowledge were observed across all economic and demographic variables. Younger
participants, those ages 50 to 58, had a greater increase in their knowledge scores than the older
participants, which virtually eliminated the age difference in knowledge observed prior to the
program. Women had larger gains in knowledge than men, but still had lower knowledge scores
after the program. Interestingly, individuals with lower self-assessed knowledge prior to the
seminar had a much larger gain in mean score compared to those with higher self-assessed
knowledge. This indicates that the programs likely were most beneficial to those with relatively
little knowledge of their retirement plans. This is consistent with the findings of other workplace
financial education programs (Clark & D’Ambrosio, 2008). The improvements in the knowledge
scores for the entire sample and for each of the various demographic characteristics are
statistically significant. Prior to the seminar, older workers (presumably those closer to
retirement) are more knowledgeable, as are men and those with greater years of education. High
earners are more knowledgeable about financial matters compared to workers with lower annual
earnings.
These results indicate that the participants in these programs increased their level of financial literacy and knowledge of retirement programs, and that the degree of learning varies across employee characteristics and economic status.

So, does behavior change with an increase in learning? For example, do workers alter their age of planned retirement, change their planned age for claiming Social Security benefits, or alter plans for working after retirement? Do participants reconsider their desire to annuitize account balances in supplemental retirement plans and their expectations concerning lump sum distributions from defined benefit plans? Evidence suggests that workers who have increased their level of financial literacy do reconsider their plans for retirement (Clark and Morrill, 2010).

Prior to the seminars, considerable uncertainty existed concerning whether to annuitize account balances in supplemental retirement plans or take lump sum distributions from the defined benefit plans, with about half the respondents indicating that they had not yet decided on these options. Higher knowledge scores are significantly associated with lower planned retirement ages among these employees.

4. A Theoretical Framework for Adult Financial Education

Most financial literacy programs have been developed with little attention to adult learning theory or adult education. The approach to education is often from a deficit perspective: the educator is seen as the expert providing the knowledge, depositing it into the minds of learners—passive recipients who receive and memorize the information, often in an unquestioning manner. Epistemologically, it is based on a “belief that a relatively stable body of knowledge and/or procedure [financial literacy] can be efficiently transmitted...[and] the primary focus is on efficient and accurate delivery of that body of knowledge to learners” (Pratt & Associates, 1998).
In response to this lack of attention to adult learning theory is the need to identify a theoretical framework that would more accurately reflect learning among adults and potentially offer much to financial literacy education. “Even though abstract, theories are profoundly helpful in understanding the experienced world” (Anfara & Mertz, 2006). For example, in teaching, theory provides the means to “name our practice” and “strengthens our ability to state clearly the rationale informing our actions” (Brookfield, 1995). Without a theory, teaching methods and strategies become arbitrary devices that lack a defined direction or purpose. It is like teaching in the dark, with little understanding of what is happening in practice. This may partially explain the mixed findings in previous evaluations of financial literacy programs. In addition, theory stimulates research by providing a focus for study, a lens to reveal understanding, and a scholarly discourse to engage in critical analysis—in this case, the teaching and learning of financial literacy (for example, Anfara & Mertz, 2006; Brookfield, 1995).

Within the field of adult education, the most established theory is transformative learning theory (Mezirow, 1991, 2000). In existence for more than 30 years, transformative learning theory continues to be the most researched and discussed theory in the field. Furthermore, it has been used as a theoretical framework in numerous disciplines—health and medical education, intercultural relations, psychology, environmental sciences, higher education, religious studies, instructional technology, English as a second language, archaeology, human resource development, and workplace learning, just to mention a few—to help make sense of learning and teaching (Taylor, 1998, 2000, 2007).

As a theory of learning, transformative learning is considered uniquely adult and focuses on how people change through educational experiences. The theory is based on several assumptions about learning and adulthood. One, adults are active, not passive, participants in
their lives and are instinctively driven to make meaning of their world. Two, rooted in the tenets of constructivism (for example, Bruner, Piaget, Vygotsky), adults have significant life experience and it is this rich personal experience that provides the basis for an established belief system. It is through a belief system that adults construct meaning from what happens in their lives. However, since there are no enduring truths and change is continuous, adults cannot always be confident of what they know or believe. They continually struggle to gain control over their lives so they are able to negotiate and act upon their own meaning. Therefore, it becomes imperative in adulthood that individuals develop a more critical worldview as they seek ways to better understand their world. This involves learning “how to negotiate and act upon our own purposes, values, feelings, and meanings rather than those we have uncritically assimilated from others” (Mezirow, 2000, p. 8). Evaluated in the context of transformative learning, it is not surprising that programs with experiential components demonstrate more impact.

Transformative learning is about the process of developing more reliable beliefs about life, exploring and validating their integrity, and making more informed decisions, all of which is central to adult learning. This psycho-cultural process of acquiring new and/or revised interpretations of beliefs regarding meaning about experiences in adulthood is explained by transformative learning theory in which “learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one’s experience in order to guide future action” (Mezirow, 1996).

To understand the transformative process, the revision of prior interpretation of experience, is to operate from the assumption that all adults have a frame of reference (worldview) made up of meaning structures, inclusive individual beliefs, values, and assumptions helping them make their way in world. They generally are acquired uncritically
through development (socialization and acculturation). Meaning structures act as perceptual filters that organize the meaning of experience. For instance, when we come upon a new experience, our meaning structures act as a sieve through which each new experience is interpreted and given meaning. As the new experience is assimilated into these structures, it either reinforces the perspective or gradually stretches its boundaries, depending on the degree of congruency (Mezirow, 1991, 2000). Being faced with an experience that cannot be assimilated can potentially lead to a transformed perspective, leading to new meaning structures. It is this change in meaning perspective, a perspective transformation, which is seen as the development of a more inclusive, discriminating, differentiating, permeable, confident, integrative, and critical worldview. Through a perspective transformation, individuals are empowered to act on their world in a more informed and critical manner.

Although transformative learning provides a lens for helping make sense of the learning process of fundamental change found among adults—change in which individuals act on their world in more informed ways—in reference to financial literacy education it provides a framework for guiding practice (Cranton, 2005; Fisher-Yoshida, Geller, & Schapiro, 2009; Mezirow & Taylor, 2009). It is a practice of fostering transformative learning with the goal of helping learners become active and critical agents of their financial lives. It offers financial literacy education a means to move away from a deficit approach to an approach that fosters personal growth and change in concert with financial understanding. Furthermore, it offers a theoretical framework for helping financial educators to guide their practice in promoting “financial competence” with “the goal of … assisting learners to appreciate the complexity of their situation…[and] deepen self-understanding and help to transform entrenched old financial behaviors” (Vitt, 2009).


4.1 Fostering Transformative Learning

Fostering transformative learning is seen as teaching for change, framed by communicative learning that engages learners in problematic ideas, beliefs, values, and feelings, critically assessing their underlying assumptions, testing their justification through dialogue, and striving for decisions through consensus building (Mezirow, 1991, 2000). Educationally, it is “predicated on the idea that students are seriously challenged to assess their value system and worldview and are subsequently changed by the experience” (Quinnan, 1997).

Making sense of fostering transformative learning requires the identification of core elements that emerge from a synthesis of the relevant research. These elements are not a series of decontextualized teaching techniques or strategies—rather, they are interdependent, framed within the basic assumptions of transformative learning theory. Also, they are not used in opposition to instrumental sharing (sharing of technical information), but in concert with, in this case, financial literacy information. Core elements of transformative learning include individual experience, critical reflection, dialogue, engaging in other ways of knowing, and awareness of context (Taylor, 2009). It is important to recognize that this is not an exhaustive list, particularly since this perspective of transformative learning does not foreground culture, social change, etc. (for example, Johnson-Bailey & Alfred, 2006; Tisdell & Tolliver, 2006).

To help bring these core elements to life in relation to financial literacy education, examples of actual practice from a recently completed mixed-method nationwide study of community-based financial literacy educators (Tisdell, Taylor & Sprow, 2010) are included. Although this study confirms to some extent that there is an emphasis on a banking approach to teaching financial literacy, it is much more complex than simply providing learners with basic financial information. It is apparent that the community-based educators are aware that financial
education is informed by the sociocultural context (for example, educator and learner’s background, the sponsoring organization, the community where it is held) and it influences their approach to teaching financial literacy. It is the educator’s response (revealed predominantly in the qualitative portion of the study) to the sociocultural context in teaching financial literacy education that is helpful in giving meaning to the core elements of fostering transformative learning.

4.2 Appreciating Individual Experience

Individual experience is the basic medium of transformative learning, including both what learners bring (prior experience), for example to a financial literacy classroom, and what experiences they have within the classroom itself. It is the “starting point for discourse leading to critical examination of normative assumptions underpinning the learner’s value judgments or normative expectations” and is indicative of the learner’s interest (Mezirow, 2000, p. 31). Research has shown that greater life experience offers more significant opportunities from which to draw upon and react to as learners engage in dialogue and reflection. Furthermore, it is the nature of that experience that offers educational opportunities for promoting learning (Taylor, 2007).

For a financial educator, engaging “experiences” occur through the sharing of financial stories from both the educator and learner. These financial stories are often personal and deeply relevant to the learner’s everyday financial lives. They provide a practical context to make sense of the financial information shared by the instructor, they make learners aware that others are struggling with similar financial experiences, and the stories of success provide hope of financial recovery. In the survey portion of the study on community-based educators, “drawing on learner’s financial experiences” was evaluated as the most effective pedagogical practice
In addition to engaging prior experience and the nature of the classroom experience itself, research has revealed that value-laden course content and intense experiential activities offer opportunities that can be catalysts for fostering transformative learning (Taylor 2000). Intense experiential activities—such as an educational program for medical students on palliative care that required students to spend time with a dying patient and family members “hearing their stories and exploring issues important to them” (MacLeod, Parkin, Pullon, & Robertson, 2003, p. 58)—can trigger the questioning of deeply held assumptions, facilitating transformative learning.

4.3 Fostering Critical Reflection

Critical reflection, central to transformative learning, involves the examination of deeply held assumptions underlying our knowledge of the world based on prior experience (Mezirow, 2000). Considered a distinguishing characteristic of adult learning, it also is seen by some as a product of “mature cognitive development” (Merriam, 2004, p. 65). Extensively researched, critical reflection is often prompted in response to an awareness of conflicting thoughts, feelings, and actions, and can potentially lead to a perspective transformation (for example, Cranton & Carusetta, 2004; Kreber, 2004; Liimatainen et al., 2001; Taylor, 1994). Although beyond the scope of this paper, several types of critical reflection (content, process, premise) exist and there are means (for example, repertory grid, coding schemas) available to educators to help assess levels of reflection among learners. In addition, research has identified factors that foster critical reflection and assist in its maturation. They include such things as providing a supportive learning environment, the engagement of self- and group dialogue, opportunities for action, and, most significantly, exposure to alternative perspectives. Educational strategies also include writing, journaling, fiction, arts-based activities, storytelling, and engaging in affective

### 4.4 Engaging in Dialogue

Dialogue, the essential medium of transformative learning, is the arena in which critical reflection and experience (prior, present) come together. In contrast to everyday discussions, its impetus is “when we have reason to question the comprehensibility, truth, appropriateness (in relation to norms) or authenticity (in relation to feelings) of what is being asserted or to question the credibility of the person making the statement” (Mezirow, 1991, p. 77). Although Mezirow emphasizes rational discourse as dialogue, research has shown it is not exclusively an analytical discussion, but instead necessitates relational and trusting communication, at times “highly personal and self-disclosing” (Carter, 2002). Relational approaches to dialogue include modeling, interpersonal and social support, and friendship promotion. Engaging a new perspective and sustaining the related actions is dependent upon an association with others who share the new perspective (Mezirow, 2000). Furthermore, it is relational dialogue that provides a process for assisting others in recognizing and engaging new perspectives. In group dialogue, the social interaction potentially leads to consensual validation, which helps, for example, learners who were HIV-positive realize “they were not alone on this transformational journey” (Baumgartner, 2002). Also, by exploring emotional issues in the context of dialogue, insight often is gained into how to best address the dynamics that contribute to resistance in learning (Dirkx, 2008).

For the financial literacy educator, this means providing opportunities for whole and small group discussion generally organized around specific tasks in which “teaching is seen as a reciprocal communicative educational relationship, with…educators and learners exploring,
thinking, inquiring, and reasoning together” (Gravett & Petersen, 2009). Small and large group approaches to teaching were evaluated by community-based financial educators as the second most-effective method of teaching (Tisdell, Taylor, & Sprow, 2010).

4.5 Engaging in Other Ways of Knowing

Other ways of knowing emphasize a whole person orientation in the educational experience, in which the learner is seen as “an affective, intuitive, thinking, physical, spiritual self” (Yorks & Kasl, 2006). It is based on research that recognizes that learners “are more likely to change in a see-feel-change sequence” (Brown, 2006) than through a rational process of analyze-think-change. It reminds the educator of the interdependent relationships that exist between affective learning (awareness of feelings and emotions) and the reflective process (for example, critical reflection). Emotions and feelings are often triggers for the reflective process, prompting learners to question deeply held assumptions (Taylor, 2000).

Recently literature has emerged that offers guidance to a more holistic approach to transformative learning, such as presentational ways of knowing—“engagement with music…dance, movement, mime, as well as all forms of myth, fable, allegory, and drama” (Davis-Manigualte, Yorks, & Kasl, 2006). Other examples include the arts (Berger, 2004; Hanlin-Rowney et al., 2006), fiction (Jarvis, 2003), theater (Butterwick & Lawrence, 2009) and cultural autobiographies (Brown, 2006). A more holistic teaching approach provides the opportunity to tap into the emotive nature of finances in constructive ways.

4.6 Contextual Awareness

Contextual awareness involves developing an appreciation for the role of context (personal and socio-cultural factors) and the impact it has on fostering transformative learning. The context refers to the immediate learning event (workshop, classroom), the personal lives of
learners (prior experience), and the larger societal (urban, rural) and historical (recession, etc.) context that is playing out as the financial literacy class unfolds (Taylor, 2000, 2007). As previously mentioned, it is the importance of being aware of learners’ prior experiences and critical incidences in their lives that predispose them to change. “The disturbing events in the participants’ lives…create a fertile ground for perspective transformation” (Pierce, 1986, p. 296). This awareness recognizes that learners are most open to new perspectives and new learning when they are on the edge of their comfort zone—their “learning edge” (Wlodkowski, 1999, p. 28). In relation to financial literacy education, it is reflected in an appreciation, as previously discussed, by financial educators of the socio-cultural context and how it shapes the learners’ behavior and attitudes (Tisdell, Taylor, & Sprow, 2010). Also, studies have found that learners are not only shaped by their socio-cultural context, but they are influencing that context as well, allowing the financial educator the opportunity to impact change beyond the classroom.

The previous discussion of core elements of fostering transformative learning hopefully helps illustrate how a theoretical framework can inform practice. It provides a larger goal of recognizing learners as active agents in the teaching and learning experience of financial literacy, stresses the importance of tapping into their financial experience, challenging them to question deeply held assumptions about money and its relationship to their lives, and offering educators guidance in pursuit of that goal. Also, it is important to recognize that instrumental knowledge (for example, basic financial information) is essential to this process. However, when considered in relation to transformative learning theory, it offers educators, program planners, curriculum developers, etc., a framework to engage the knowledge that assists learners to be financially knowledgeable and to be active and critical agents in their financial future.
5. The Role of Informal Learning in Financial Education

Another important area of discussion concerns informal learning among adults and its implications for financial literacy education. Informal learning is typically defined as intentional learning that transpires outside of formal educational settings/curriculum. Often unstructured and spontaneous, informal learning occurs through a variety of mediums and is the most prevalent means of learning among adults. As Director Coffield of the Learning Society observed: “If all learning were to be represented by an iceberg…the submerged two-thirds of the structure would be needed to convey the importance of informal learning” (Coffield, 2000). Giving some attention to informal learning helps remind financial educators, policymakers, and program planners that most financial education efforts likely have been within formal settings with little attention to learning that goes on outside those settings (Hager & Halliday, 2006). Questions that come to mind are:

- How do most individuals learn about financial issues outside of the formal setting?
- What are their resources?
- What challenges do they face in pursuit of this learning?
- What helps facilitate their informal learning about financial issues?

What is understood about informal learning is often characterized in contrast to formal education. Informal learning also is discussed in concert with incidental or tacit learning, which occurs unintentionally through experience outside an individual’s conscious awareness (Livingstone, 2001; Marsick & Watkins, 2001; Schugurensky, 2000). Characteristically, informal learning tends to be unstructured, self-directed, and often prompted by an internal or external event. It can be planned or random (often in a haphazard and unstructured fashion), is subject to chance, and frequently involves learning with others (Cross, 2007; Marsick & Volpe,
1999). For example, informal learning might involve a planned activity in which learners deliberately seek out information from a variety of sources (for example, library, Internet) in preparation, for example, for refinancing their home. However, it is just as likely that much learning will occur in an unplanned fashion through general socialization within a community. For example, an “over the fence” conversation with neighbors about low interest rates and refinancing can result in new learning through informal means.

In addition, informal learning “encompasses learning both at work and at leisure” (Gorard, Frevre, & Rees, 1999). From a review of the literature involving a series of case studies, Cullen et al. (2000) found that informal learning encompasses a diversity of arrangements, actors and practices” (p. 8) and takes place in a variety of settings. It is delivered through a variety of mediums, such as theater, community workshops, and videoconferencing. The learning process itself is described as “self-managed learning, computer-based learning, mentoring” (p. 8). Learners are quite diverse and oftentimes learning occurs without individuals being aware it is happening (Cullen et al., 2000). Furthermore, informal learning is increasingly becoming recognized as significant to workplace learning, where instead of having employees participate in planned workshops or training, it is more productive to create “conditions that facilitate workers learning from each other and their surroundings” (Hager & Halliday, 2006).

There are additional factors to consider when making sense of informal learning, which occurs throughout the lifespan of an individual in concert with other activities. Also, it is frequently triggered during moments of “transition” such as birth, death, marriage, and divorce (Gorard, Frevre, & Rees, 1999; Livingstone, 2001; Merriam & Clark, 1991; Mezirow, 2000; Marsick & Watkins, 2001). Factors that tend to inhibit informal learning, particularly within the work environment, include lack of time, lack of available learning resources, and lack of reward
PROMISING LEARNING STRATEGIES, INTERVENTIONS, AND DELIVERY METHODS IN FINANCIAL LITERACY EDUCATION

(Lohman, 2000). In addition, the “personal, social, business, and cultural context” in which the individual works and lives plays a key role in influencing the informal learning experience (Marsick & Watkins, 2001, p. 29). The need to learn informally often evolves in response to an unmet need at a particular time in an individual’s life or community (group of individuals). From a financial literacy perspective, the field of adult education provides some insight about informal learning and how it is shaped by the socio-economic context (Buckland, 2010). For example:

- Since people are situated in very different contexts, their financial literacy needs will vary.
- Middle-income individuals may learn more through middle-class institutions such as universities and may understand risk and yield differences across different kinds of investments.
- Low-income individuals may rely more on informal networks of friends and family and may understand the fees and costs of using different types of banking services in their neighborhoods (p. 3).

5.1 Research on Informal Learning

Empirically, informal learning among adults has been studied since the late 1960s. The pioneering work by Tough (1971, 1979) found that more than two-thirds of intentional learning by adults occurred completely outside the formal context (for example, educational programs, courses, seminars) within a variety of settings (home, work). Many of his findings are valid today when seen in relationship to more recent research. For example, Livingstone (2001) states:

Surveys conducted in Ontario in 1996, 1998, and 2000…used a similar format to the original Tough studies and Penland survey. These surveys have found that the vast majority of adults indicate involvement in some form of informal learning during the past year. Estimated
time commitments have fluctuated between averages of about 12 and 15 hours a week during this four-year period (p. 9).

In addition, recent studies in Canada that looked at informal learning at specific sites (work, home) found 80 percent of participants averaged five hours per week in informal learning related to their household endeavors. Learning activities most often engaged in were home renovation and gardening (66 percent), with home budgeting involving about 45 percent of the study participants (New Approaches to Lifelong Learning [NALL], 1998; Livingstone, 1999). Overall, Canadian adults were found to spend “vastly more time in informal learning activities than in non-formal education courses [instructor led], a ratio of at least five to one” (Livingstone, 2001).

5.2 Implications for Financial Literacy Education

Considering the ubiquitous presence of informal learning among adults, it becomes important to reflect on ways that organizations could take advantage of its presence in promoting financial literacy. Not only exploring ways that facilitate informal learning of financial issues, but also encouraging informal learning within formal settings, so learners are more skilled in engaging in informal learning when they complete a financial education program. This perspective of financial education and informal learning is tied to a larger goal of promoting lifelong learning (Hager & Halliday, 2006).

It is worth pointing out, particularly regarding promoting informal learning and financial literacy, that little explicit research has occurred on informal learning and financial literacy. In response to this concern, a few implications for practice to be considered by educators, program planners, and organization that are deeply invested in promoting financial education follow. The few sources provided are educational guides related to the particular educational interventions.
Within classroom and workshop settings, it is helpful to provide opportunities for informal learning experiences in which students work in small discussion groups around loosely structured financial activities (planning a budget), requiring them to draw on their own expertise and available resources to complete the activity (for example, Brookfield & Preskill, 2005).

Similar informal learning activities initiated in the classroom also should be extended outside the classroom, where learners (collaboratively or individually) have projects that require them to seek out and evaluate financial information from a variety of sources (for example, library, friends, TV) relevant to their financial needs. Also, provide opportunities to follow up on these experiences, particularly how to judge and evaluate the quality and value of the information. Research has shown that learners’ ability to work in self-directed and informal ways varies. Guides are available to assist educators in staging the process for learners from structured to less structured and more informal learning activities (Grow, 1991).

Outside the classroom, it would be helpful for financial organizations to become a clearinghouses for reliable financial information across the spectrum of financial means, from the most basic to very complex financial information. A good example of some of this information can be found on the National Endowment for Financial Education website (www.nefe.org). Developing tools that assist individuals in becoming critical consumers as they learn informally about financial literacy from various mediums (for example, newspaper, radio, computer software, Internet, television) is highly significant.
• Develop activities (for example, games) that provide ways for individuals to have fun and enjoy informal learning with others about personal finances, minimizing the stress often associated with this endeavor. This “fun” approach also would help foster collaborative informal learning among spouses, friends, and family about managing personal finances.

Conclusions

In this paper, we have reviewed an array of financial education initiatives that are currently in place. While some evidence exists that financial education improves financial knowledge and affects financial decision making, there are ways to potentially improve the effectiveness of financial education programs.

We have argued that the workplace is a good venue through which to pursue effective education programs. Moreover, there are critical teachable moments that need to be taken advantage of and this should be recognized and incorporated into best practices in financial education programs. Providing retirement education at the start of a job and at retirement is a prime example of offering information and education when it is most needed.

We also have seen that both formal and informal education and learning is important. Experiential and informal learning provide a sound context for any financial education program; understanding and working effectively within this context will be critical to any program’s success.

It is important, as well, to recognize there is no one-size-fits-all solution and financial education programs should complement the specific needs of the population of interest. There are large differences in individuals’ levels of financial knowledge and these differences need to be taken into account in the design of financial education programs.
Most financial education programs have been developed with little attention to adult learning theory. To be effective, financial education programs must recognize that adults are active participants in their lives, they have had significant life experiences, and they are not always confident in what they know or believe. Programs that are not designed for the ways in which adults learn cannot be expected to have measurable impact.

Finally, to be effective, programs have to find ways to be engaging for participants. This is true for students, young adults, and adult learners. As several of the studies in workplace financial education have shown, it is important to listen to the specific needs of employees and provide programs that fit those needs. The more these needs are met and the more participants are engaged, the higher the chances of achieving a successful program.
References


