

Review of Literature

**in support of the
Real Money, Real World
Statewide Evaluation**



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Review of Literature: *Real Money, Real World*

Introduction

The ability to manage one's personal finances has become increasingly important in today's world (Greenspan, 2005; Morton; 2005). Unfortunately, studies have shown that many American adults do not possess adequate financial knowledge (Braunstein & Welch, 2002). The Department of Commerce reported a negative savings rate (-0.5%) in 2005 for the first time since 1933 ("U.S. Savings Rate," 2006). Furthermore, studies of college students (Avard, Manton, English, & Walker, 2005; Chen & Volpe, 1998) and high school students (Jump\$Start Coalition for Personal Financial Literacy, 2002; Valentine & Khayum, 2005) indicate that they lack basic knowledge and skills in personal financial management. Students' lack of financial knowledge limits their ability to make informed decisions. Poor financial choices can have a number of negative, and sometimes long-term, consequences. Thus, the lack of financial literacy is a major concern in our society (Braunstein & Welch, 2002; Chen & Volpe, 1998).

The need for improved financial education has been described as urgent (Beverly & Burkhalter, 2005; National Council on Economic Education, 2005). Proponents of financial education argue that getting an early start on financial education is critical and should begin as early as possible (Beverly & Burkhalter, 2005; Greenspan, 2005; Suiter & Meszaros, 2005). Greenspan (2005) promotes the need for educators to focus on "providing youth with a foundation for understanding personal financial management." He notes that financial education is particularly important for "those who have been traditionally underserved by our financial system." The widespread advocacy by individuals in government, business, and education (e.g., Greenspan, 2005; Morton, 2005) and organizations (e.g., National Council on Economic Education www.ncee.net, National Endowment for Financial Education www.nefe.org, and Jump\$Start Coalition for Personal Financial Literacy www.jumpstartcoalition.org) and the existence of standards (Jump\$Start Coalition for Personal and Financial Literacy, 2002; Wilhelm & Chao, 2005), have begun to produce positive change but there is still much to be done.

Recently, there has been an increase in the development and delivery of financial education programs; these programs are offered by a variety of organizations, including Cooperative Extension (Fox, Bartholomae, & Lee, 2005). Financial education can be an effective means of creating change. Studies of adults generally find a positive correlation between financial training and achievement of specific goals (Braunstein & Welch, 2002). Studies of young people also indicate that they increased their knowledge and skills through participation in programs such as *High School Financial Planning* (Boyce & Danes, 1998; Danes & Haberman, 2005) and *Money Talks* (Varcoe & Fitch, 2003). At the present time, financial education is not taught systematically as part of the curriculum in elementary, middle, or high schools. In Ohio, State Treasurer Richard Cordray is coordinating efforts to create financial education standards for schools. However, no new funds have been allocated for financial education programs.

Ohio State University Extension 4-H Youth Development has recognized the need for financial education. In response to this need, in 2005 a team developed a curriculum entitled *Real Money, Real World* (Bridgeman et al., 2005) adapted with permission from a University of Illinois

publication. This six-lesson curriculum is targeted for middle school students. Effective delivery of financial education is an important aspect for educators to consider (Fox et al., 2002). *Real Money, Real World* programs are designed to be a partnership of the county Extension Office, the school, and the business community. Schools represent an ideal delivery site for financial education, in particular because they provide universal access (Beverly & Burkhalter, 2005). The strategies used in this the *Real Money, Real World* curriculum – active learning (Suiter & Meszaros, 2005; Varcoe & Fitch, 2003) and partnerships (Morton 2005; Suiter & Meszaros, 2005) – have been recommended as effective strategies. However, Boyce and Danes (1998) suggest that schools alone cannot tackle the task of preparing financially literate youth.

Definitions

Financial Literacy

Hogarth (2002) notes that there are many definitions of financial literacy ranging from broad to narrow. Generally speaking, financial literacy denotes “one’s understanding and knowledge of financial concepts” (Fox, Bartholmae, & Lee, 2005, p. 195). More specifically, it refers to “knowledge and skills related to money management. It includes the ability to balance a checkbook, manage a credit card, prepare a budget, take out a loan, and buy insurance” (Beverly & Burkhalter, 2005, p. 121). Another view of financial literacy combines both knowledge and understanding and actually “using that knowledge and understanding of that knowledge to plan and implement financial decisions (Hogarth, 2002, p. 15).

Financial Education

Financial education can include “any program that encompasses the knowledge, attitudes, and/or behavior of an individual toward financial topics and concepts” (Fox et al., 2005, p. 195). Specifically, Tennyson and Nguyen (2001) define personal finance education to include “the study of income and its determinants, money management and budgeting, savings and investing, and credit and debt” (p. 243). The knowledge gained from financial education helps people to make sound, informed financial decisions (Valentine & Khayum, 2005).

Simulation

Based on the idea of learning through experience, simulation is an educational technique that involves immersion in an authentic, realistic situation in a way that approximates the real-life situation as closely as feasible. Simulation is a guided experience that “evokes or replicates substantial aspects of the real world in a fully interactive manner” (Society for Simulation in Healthcare, 2006). It is experienced prior to performing the actual task or situation, as a way to teach and practice performance-based practices or skills.

Review of Literature

This section reviews the available literature on the level of financial literacy for various groups, the need for financial education, and strategies recommended for use in financial education programs. Particular attention is given to simulations as an educational technique, as this strategy

is the core of the *Real Money, Real World* curriculum. The results of financial education programs are also discussed. The emphasis of this review is on youth as the target audience.

Level of Financial Literacy

The ability to manage one's personal finances has become increasingly important in today's world (Greenspan, 2005; Morton; 2005). Unfortunately, studies have shown that American adults, college students, and high school students do not possess adequate financial knowledge. Thus, the lack of financial literacy is a major concern in our society.

Adults. An in-depth review of financial literacy studies of adults is beyond the scope of this review. For reviews, see Hogarth (2002), Hogarth, Beverly, and Hilgert (2003), and Braunstein and Welch (2005).

College students. A number of studies have examined college students in relation to their financial knowledge and practices. In a study of college freshmen in Texas, 92% failed an exam containing questions related to everyday financial matters (Avard et al., 2005). Chen and Volpe (1998) found that students answered only half of the questions correctly on their survey of financial knowledge. They also found that non-business majors, undergraduates, females, African American students, and those with less work experience and lower incomes had lower knowledge scores. Although most studies of college students were conducted at a single university, the findings from Chen and Volpe's (1998) study, which include students from 14 college campuses, also indicated a lack of personal financial knowledge. Thus, the lack of knowledge among college students can be said to be widespread.

Studies of financial practices have produced mixed results. Some studies indicate that many college students do not keep a written budget (e.g., Henry, Weber, & Yarborough, 2001). Female college students were more likely than males to keep a budget (Hayhoe, Leach, Turner, Bruin, & Lawrence, 2000; Henry et al., 2001) as well as to use recommended financial practices such as shopping with a list, planning spending, and saving regularly. However, other studies reported better financial practices by males (Chen & Volpe, 1998). Older students often used better financial management practices than younger students (Henry et al., 2001); however Murphy (2005) found that age did not differentiate higher and lower levels of financial literacy. Overall, the fewer financial management practices students employed, the more financial stress they experienced (Hayhoe et al., 2000).

Low levels of knowledge have been attributed to lack of courses at the college level and less experience with financial management practices (Murphy, 2005). Because college students experience financial difficulties, some researchers have recommended that programs start as early as junior high to teach about financial topics, particularly in the area of credit (Hayhoe et al., 2000).

High school students. A number of organizations have surveyed high school students regarding their financial knowledge. Perhaps the most cited are the surveys conducted by the Jump\$tart Coalition for Personal Financial Literacy, a Washington, DC-based not-for-profit organization that seeks to improve the personal financial literacy of students in kindergarten through college. Beginning in 1997 (with subsequent studies in 2000, 2002, 2004, and 2006), the

JumpStart Coalition has measured 12th graders' level of knowledge of personal finance basics in four areas: income, money management, savings and investments, and spending and credit. Results of the most recent survey, conducted in 2005-2006 with 5,775 high school students in 37 states, showed a slight increase in scores over the previous year, but with only about half (52.4%) of the students receiving a passing grade (60% or higher). Studies by other organizations have produced similar results.

Information about instrument design for these surveys was generally lacking. A study of the reliability and validity of the JumpStart survey showed that although the surveys had a high overall internal consistency, those of the subscales were lower than desirable (Lucey, 2005). In addition, there was limited evidence to support the construct, congruent, and predictive validity of the JumpStart surveys.

Middle school students. Although proponents of financial education recommend that such programs begin as early as possible, no studies of financial knowledge with middle school students were located. Thus, this represents an area for future study.

Need for Financial Education

In addition to the apparent low levels of financial knowledge discussed previously, several other trends point to the need for financial education. Hogarth (2002) noted that the financial marketplace has become more complex. There are more products and services to choose from than in the past, and technology has changed the way services are delivered (e.g., Internet banking). In this climate, parents feel ill equipped to teach their children about money management. Compounding these trends, there is a shift to more individual rather than institutional responsibility for making financial management decisions. While tests of knowledge may not be the best indicator of financial literacy, Hogarth (2002) also reported statistics on credit card debt, delinquent payments, bankruptcy, and retirement savings showing that consumer behaviors in these areas also point to lack of financial literacy and thus support the need for financial education.

Many agree that educating consumers makes good business sense (Simmons, 2006) and is in the best interest of society (Hogarth, 2002). Although a variety of audiences are targeted for financial education, youth are recognized as an important audience for financial literacy initiatives. Many teens are working and have access to disposable income. As Hogarth (2002) noted, "the advantage of educating youth is that they grow up into financially literate adults" (p. 22).

Financial Education Teaching Strategies

Programs to teach about financial topics are based on the assumption that money management is a learned skill (Meeks, 1998). Although one's understanding of economic concepts is developmental (Meeks, 1998), learning is cumulative. Basic concepts are within the reach of young children, and no matter what the age group, teaching strategies must take developmental appropriateness into account (Martin & Oliva, 2001; Varcoe, Peterson, Garrett, Martin, Rene, & Costello, 2001). Existing standards include benchmarks across the K-12 range (JumpStart, 2002).

Among the tasks facing financial educators is finding meaningful learning experiences for their target audiences. Financial concepts may be integrated within a variety of subject matter areas or may be offered as a separate course. Financial education can be taught using a variety of strategies; however, those involving active learning such as simulation and role playing are suggested for youth (Suiter & Meszaros, 2005; Varcoe & Fitch, 2003). These methods help to make abstract concepts more tangible to students. Active learning strategies are those likely to influence transfer of learning (Gardner & Korth, 1997; Haskell, 2001). Specifically, the most recent Jump\$tart Coalition survey found better financial literacy performance for students who play a stock market game, leading the Coalition to recommend that interactive methods such as simulations are the best way to teach about real-life money management situations. Among the difficulties involved in conducting financial education programs for young people, however, is being able to document transfer of learning, when the ultimate test of their increased awareness, knowledge, and skills is still years away.

Furthermore, development of partnerships with community organizations, schools, and businesses has been promoted as a way to bridge the gaps in providing such financial education programs (Morton, 2005; Suiter & Meszaros, 2005). Both active learning and partnerships are strategies used in the *Real Money, Real World* program. As simulation is at the core of the *Real Money, Real World* curriculum it is discussed in more detail in the following section.

Simulation. The core of the *Real Money, Real World* experience is the simulation. Based on the idea of learning through experience, simulation is an educational technique that involves immersion in an authentic, realistic situation in a way that approximates the real-life situation as closely as feasible. Such experiences incorporate players who assume specific roles (Kriz, 2003). Simulation is a guided experience that “evokes or replicates substantial aspects of the real world in a fully interactive manner” (Society for Simulation in Healthcare, 2006). It is experienced prior to performing the actual task or situation, as a way to teach and practice performance-based practices or skills.

The technique of simulation is widely used in the health field (e.g., Society for Simulation in Healthcare ssih.org; see also Lane, Slavin, & Ziv, 2001). It is also used in training and organizational development (Kriz, 2003). Simulations in some fields rely on computer applications (e.g., software engineering; Oh 2002), while others involve interaction with people. Simulations for young people must keep in mind the developmental needs of the targeted age group and take these needs into account in their design (Millians, 1999).

Debriefing or reflection following participation is an important aspect of the learning experience. This step is necessary in order for the participants to evaluate the simulation itself as well as the knowledge gained in the process (Kriz, 2003). As well, it is a time when misconceptions may be clarified. Kriz (2003) notes that the reflection phases allows participants “to apply the knowledge acquired during the gaming simulation to the real world” (p. 497) and thus facilitates the transfer of learning from the simulation to real-life situations. This phase coincides with the experiential learning model promoted in 4-H Youth Development programs. Without this step, important insights may be lost, and the value of the simulation to the participants is diminished.

A simulation allows for control of the learning environment and adaptation to meet the students' needs. Part of the value of simulations is that they attempt to make complex concepts understandable (Kriz, 2003). Simulations are thought to facilitate development of knowledge, proficiency, and confidence. They are thought to be superior to lecture methods for teaching about complex situations and choosing among alternatives (Oh, 2002).

Results of Financial Education Programs

Perhaps the most difficult task for educators is determining the effectiveness of financial education programs (Hogarth, 2002; Lyons, Palmer, Jayaratne, & Scherpf, 2006). Whether higher levels of financial knowledge lead to improved financial practices has not been well documented (Lucey, 2005). Despite an increased interest in financial education, there is limited information available regarding the effectiveness of various program models (Anderson, Zhan, & Scott, 2004; Lyons et al., 2006). Financial educators may lack evaluation capacity (i.e., understanding how to conduct an effective evaluation) as well as being challenged by limited resources (e.g., time, staff, and financial resources). Evaluation is further complicated when programs vary in content, delivery methods, and target audience.

In general, studies of adults (Braunstein & Welch, 2002; Hogarth, 2002) and young people (Boyce & Danes, 2002; Danes & Haberman, 2005; Varcoe & Fitch, 2003) indicate that they increased their knowledge and skills through participation in financial education programs. Studies of the *High School Financial Planning Program* showed that students demonstrated greater knowledge, skills, and confidence in managing their money upon completion of the program, and these results were in evidence three months after participation (Boyce & Danes, 1998). However, in the discussion of the results of their most recent financial knowledge surveys, the Jump\$tart Coalition noted that students who take a high school course in personal finance tend to do a little worse on the exam than those who do not. Obviously this is not the desired outcome. The Coalition concluded that this may be due to a focus on financial facts versus personal financial decision making.

Only one study was located related to the financial literacy of middle school students. In this study, Mincemoyer and Furry (2003) reported on a formative evaluation of the 4-H *Financial Champions* curriculum. The authors found that 60% of those who used the curriculum learned something from the activities. They mentioned the skills of problem solving and decision making as those practiced most often. It should be noted that this study was conducted as a formative evaluation of the curriculum. The youth completed varying numbers of activities and this variable was not controlled for in the analysis.

Summary and Conclusions

The literature appears to be dominated by studies of financial knowledge. Studies of this nature are useful for raising awareness about the topic, but do little to address the larger issues related to financial literacy. Many of the studies used a similar method, that is, students are given a multiple-choice test to determine how much they know about various topics. In many cases, each researcher used a survey created specifically for the study. Such lack of consistency across studies makes it difficult to compare results. Whether these tests represent an accurate means of assessing financial knowledge has been questioned (Lucey, 2005). Despite issues related to the

psychometric properties of the instruments used to assess how knowledgeable students are about financial concepts, surveys point to a knowledge gap. Other statistics provide evidence that adult consumers are not making good financial decisions. Thus, it seems safe to conclude that the level of financial literacy is less than desirable.

A review of educational literature reveals the benefits of experiential methods, and educators are encouraged to use strategies that are known to be most effective in the transfer of learning. A smaller body of literature reports the results of participation in financial education programs. For the most part, the purpose of these studies has been to demonstrate the effectiveness of a particular curriculum rather than to compare participants and non-participants. No studies using control groups were identified. Only one study involving middle school students was located.

Measuring the effectiveness and impact of financial literacy programs is an important concern (Fox et al., 2002). Fox et al. (2002) note that

practitioners who can demonstrate the effectiveness of their programs can contribute significantly to the identification of “best practices” and the setting of policies that may lead to consumers who are better equipped to survive, and more important, thrive in our vibrant, diverse, complex financial marketplace. (p. 457)

Clearly, there is a need for financial education programs targeted to young people. Based on this review, studies of the effectiveness of financial education programs for middle school students appear warranted.

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