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Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy

This study explicates the concept of financial literacy, which has blossomed in use this century. Scholars, policy officials, financial experts and consumer advocates have used the phrase loosely to describe the knowledge, skills, confidence and motivation necessary to effectively manage money. As a result, financial literacy has varying conceptual definitions in existing research, as well as diverse operational definitions and values. This study dissects the differing financial literacy definitions and measures, urging researchers toward common ground. A clearer definition should improve future research, in turn helping consumers better understand and adapt to changing life events and an increasingly complex economy.

If American consumers learned anything from the financial crisis that began in 2008, it was the importance of managing money. When the economy was booming, the personal savings rate in the United States dipped below 0% and did not climb above 0% until 2008 and the onset of the financial crisis (U.S. Department of Commerce, Bureau of Economic Analysis 2008). Although saving is only one aspect of managing money, it is important, given the volatility of the modern economic climate and related factors that are often beyond an individual's control (Perry and Morris 2005).

Government officials and consumer advocates noticed warning signs such as the depressed savings rate and took action to help consumers understand and adapt to changing life events and an increasingly complex economy. In 2006, the United States launched a first ever national strategy to improve financial literacy (U.S. Department of the Treasury, Office of Financial Education 2006). Unfortunately, the national strategy began without a clear definition of financial literacy or how it can be consistently measured. A conceptual definition of financial literacy was not adopted and added to the National Strategy for Financial Literacy until 2009; an operational definition in the form of consistent measurement criteria has yet to be added (President's Advisory Council

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on Financial Literacy 2009). Individuals and organizations doing basic, applied and program evaluation research had used—and, in some cases, continue to use—their own definitions and measures of financial literacy. This confusion slows progress and hinders the ability to design meaningful and effective consumer education programs.

The purpose of this study was to explicate the concept of financial literacy by analyzing the many ways in which it has been interpreted and measured in research since 2000, the start of the decade in which the push for greater education and empowerment began taking solid root. The study sought to identify existing conceptual and operational definitions of financial literacy, compare and contrast these definitions with the one the U.S. government adopted and articulate rationale for widespread adoption and use of a clear, consistent definition in research and curriculum planning. Ultimately, this study is a rally cry toward common ground for all who work to address financial literacy concerns in America, with the ultimate goal of improving consumers' self-efficacy relative to personal finance.

Helping consumers is at the heart of this rally cry. Given the increasing complexity and variety of financial products and services available, managing money can be difficult, particularly for the young or those at economic disadvantage (Consumer Bankers Association 2003; National Endowment for Financial Education 2006). However, money-related struggles do not necessarily disappear as consumers move through adulthood; they often evolve or change (Employee Benefit Research Institute 2008).

Is financial literacy the right phrase, though, to describe what a consumer needs to effectively adapt to changing needs, life events and economic forces? The question is moot. The President's Advisory Council on Financial Literacy is defined by the phrase financial literacy, as is the Financial Literacy and Education Commission, which shepherds the *Taking Ownership* National Strategy for Financial Literacy. In addition, the Jump$tart Coalition® for Personal Financial Literacy carries this phrase in its name and mission. All told, these leading bodies represent more than one hundred of the most influential government agencies and consumer organizations in the nation, ranging from the AARP Foundation to the U.S. Department of the Treasury (Jump$tart Coalition for Personal Financial Literacy 2008; U.S. Department of the Treasury 2006). These organizations have demonstrated clear commitment to the concept of financial literacy, and as of 2009 have moved to a common definition of the term, examined later in this study. It is time for the research community to reach common ground with these advocates.

BACKGROUND

Consumer behavior, public policy, sociology and mass communication scholars may not agree on how to best define the concept of financial literacy, but they are quick to identify reasons people struggle to manage money. Generally, these arguments fall into three broad categories: banking deregulation and an increasingly complex global economy (Anthes 2004; Kozup and Hogarth 2008; Leicht and Fitzgerald 2007), the demise of financial education in secondary schools (Anthes 2004; Edwards, Allen, and Hayhoe 2007; Emmons 2005; Fox, Bartholomae, and Lee 2005) and a pervasive culture of instant gratification stoked by aggressive consumer marketing and a proliferation of readily available credit (Anthes 2004; Kozup and Hogarth 2008; Leicht and Fitzgerald 2007).

Although researchers cite many reasons for low levels of financial knowledge and self-efficacy, they have not reached a compelling consensus on what financial literacy is or how to measure the degree to which one is, or is becoming, financially literate. Until the research community embraces a common foundation, the value of empirical studies and education programs will remain compromised.

METHOD

This concept explication drew upon research studies, expert insights and intervention programs made public since 2000 when the U.S. government included the phrase in naming the Financial Literacy and Education Commission (U.S. Government Accountability Office 2006). The study focused upon definitions of financial literacy in the United States yet incorporated related international perspectives, as appropriate.[1]

In all, more than one hundred resources were examined, including academic and professional journal articles; government and industry resource materials; association Web sites and other research and program materials. The study is not meant to be an exhaustive review of all research ever conducted about financial literacy, but rather an evaluation and analysis of a representative mix of studies over the past decade.

1. Australia, Canada and the United Kingdom use conceptual definitions of financial literacy similar to the definition in the United States (Financial Literacy Foundation 2008; Financial Services Authority 2008; Task Force on Financial Literacy 2009). The conceptual definition of financial literacy introduced by Canada is perhaps the most comprehensive and clearly stated: "Financial literacy means having the knowledge, skills and confidence to make responsible financial decisions" (Task Force on Financial Literacy 2009).

The literature review is organized into two sections: (1) conceptual definitions and (2) operational definitions. Conceptual definitions explain abstract concepts in concrete terms. Operational definitions convert these concrete terms into measurable criteria. Both definitions are particularly important because of criticism that the *Taking Ownership* National Strategy for Financial Literacy provides broad direction without specific, tangible measures and goals (U.S. Government Accountability Office 2006). This study seeks to close the gap between the inspirational spirit of the *Taking Ownership* strategy and the nuts-and-bolts reality of ongoing research and program development.

Following the literature review, the article draws conclusions regarding the importance of a singular conceptual definition of financial literacy and consistent measurement methods for that concept. It ends with a challenge to researchers.

LITERATURE ON FINANCIAL LITERACY

Conceptual Definitions

The conceptual definitions of financial literacy have grown as complex as the economy. Scholars and financial experts have long disagreed on how to define the concept.

By the most basic definition, financial literacy relates to a person's competency for managing money. The concept has not always been described as financial literacy, but the idea dates to the early 1900s and the advent of consumer education research and initiatives in the United States (Jelley 1958). Financial literacy is typically measured at the individual level and then aggregated by groups, such as high school students or low-income adults, to provide a macroview.

Based upon a review of research studies since 2000, the many conceptual definitions of financial literacy fall into five categories: (1) knowledge of financial concepts, (2) ability to communicate about financial concepts, (3) aptitude in managing personal finances, (4) skill in making appropriate financial decisions and (5) confidence in planning effectively for future financial needs.

Category 1: Knowledge of Financial Concepts

Knowledge is the most obvious—and most common—component of the many conceptual definitions of financial literacy. To effectively manage money, one must first know something about money. Scholars validate the importance of knowledge by referencing how knowledge can improve one's financial well-being (Braunstein and Welch 2002; Vitt et al. 2000).

Still, some couch the need for knowledge in specific ways, such as understanding "the basic tenets of sound financial health and responsibility" (National Foundation for Credit Counseling 2008). The United States' initial documentation for the National Strategy for Financial Literacy highlights a need for "... the information, knowledge, and skills to evaluate options and identify those that best suit (a person's) needs and circumstances" (U.S. Department of Treasury 2006: Foreword Part 1, p. V). All of these explanations are so vague that they offer little help in framing future research.

Category 2: Ability to Communicate about Financial Concepts

Fox, Bartholomae, and Lee (2005) are among the several scholars who twist the knowledge-based definition of financial literacy a bit. Rather than focusing solely on how much information an individual has, they define financial literacy as "crucial to effective consumer decision making" (Fox, Bartholomae, and Lee 2005, p. 195). This presents financial literacy as a broader application of knowledge.

Category 3: Aptitude in Managing Personal Finances

Many conceptual definitions of financial literacy include some mention of an ability or aptitude for managing personal finances. These references are as brief as Americans having "managed their finances poorly" due to poor financial literacy (Chen and Volpe 2002, p. 289) or as detailed as:

> ... ability to keep track of cash resources and payment obligations, knowledge of how to open an account for saving and how to apply for a loan, basic understanding of health and life insurance, ability to compare competing offers, and plan for future financial needs (Emmons 2005, p. 336).

Lengthier definitions, such as the one used by Emmons (2005), tend to elaborate upon specific attributes of financial literacy or even, in some cases, possible ways to operationally measure financial literacy. The salient point is that literacy is more than simply a measure of knowledge. Literacy reflects one's ability to perform a host of tasks related to money, including but not limited to earning, protecting and spending that money.

Category 4: Skill in Making Appropriate Financial Decisions

Decision-making skills factor heavily into most definitions of financial literacy. Literacy cannot be assessed unless it is tested, and making decisions is the very heart of money management. Scholars and other experts describe decision making in several ways: "successful financial decision making" (Jump$tart Coalition for Personal Financial Literacy 2008), "knowledge needed to make informed decisions" (Rhine and Toussaint-Comeau 2002, p. 13) and "make smart choices" (Financial Fitness for Life 2008) are a few examples.

Financial decisions are greatly influenced by the constant tug between a proliferation of goods and services in the marketplace and a person's limited resources to acquire such goods and services. The National Endowment for Financial Education (2006) illustrates this concept well in its definition of financial literacy:

> (Financial literacy programs) work to improve the development, acquisition, maintenance, and conservation of scarce resources that allow families and individuals, as they interact with the world around them, to better their levels of living.

Several scholars frame the financially literate as people who "successfully manage debt" while making financial decisions that reflect their personal values (Stone, Wier, and Bryant 2008, p. 12). This example brings ethics and integrity into the conceptual definition. One pair of scholars is slightly more pragmatic: "a set of critical thinking skills to weigh and assess the pros and cons of a particular decision relative to one's own needs, values, and goals" (Kozup and Hogarth 2008, p. 131). In these cases, decision-making skill is seen as a core competency when it comes to financial literacy.

Category 5: Confidence to Plan Effectively for Future Financial Needs

Not all scholars integrate confidence in financial planning into the financial literacy equation. When they do, the language is clear and consistent such as "understanding about investing and financial planning" (Koenig 2007, p. 44).

A notable exception is from Wi$eUp, a financial literacy program targeted by the U.S. Department of Labor toward Generation X and Y women (Wi$eUp 2008). Wi$eUp notes that financial literacy involves the development of "responsible saving habits for future retirement." It is the only instance in which planning is explicitly presented as a habit to be developed and adopted. Other programs and scholars simply imply that planning will stem from improved literacy or discredit that planning—in and of itself—is a skill inherent to financial literacy.

A suitable alternative is the view that confidence in planning is to long-term financial management as decision-making skills are to short-term financial management. Indeed, one can plan without making immediate decisions, just as one can make immediate decisions without planning. Yet, both skills need to be developed.

Other Dimensions Evident in Existing Conceptual Definitions

Beyond the five categories already identified and articulated, several scholars and programs attempt to stretch the conceptual definition of financial literacy more broadly to include other dimensions. For example, the Financial Fitness for Life (2008) program's conceptual definition of financial literacy strives to embrace global understanding. Lusardi and Mitchell (2007) allude to a worldview. In contrast, Hira and Loibl (2005) explain the impact of employer-provided financial education on a smaller, more private world—the individual's sense of workplace satisfaction.

The National Strategy for Financial Literacy (U.S. Department of Treasury 2006) and the Comptroller of the Currency (2008) present financial literacy as a proactive measure of defense against fraud. In a similar vein, other scholars reference the risky nature of the credit culture when defining financial literacy. Stone, Wier, and Bryant (2008, p. 12) define financial literacy, in part, as "basic financial knowledge about how to successfully manage debt." Gross, Ingham, and Matasar (2005, p. 12) follow a similar path: "basic information needed to function in our credit-based economy."

It is worth noting that several scholars who have published recent studies about financial literacy have not explicitly defined the concept (Chen and Volpe 2002; Meier and Sprenger 2007; Morton 2005; Servon and Kaestner 2008). This further confirms the need for a synthesized definition.

Root Meaning

A worthy exercise is to view the conceptual definition of literacy from outside the arena of financial services. In America, for example, literacy comes in many forms—i.e., political, media, environmental, cultural and financial. These could be viewed as civic responsibilities or simply the knowledge and skills necessary to meet the demands of living in a democratic society.

The most familiar use of the word literacy is in relation to reading. The national reading literacy organizations rely upon operational definitions to explain what literacy is:

> An individual's ability to read, write and speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society (National Institute for Literacy 2008).

> An ability to read want ads, fill out job application forms, read maps or read story books to children (American Literacy Council 2008).

These definitions of everyday literacy are functionally focused and specific. Literacy, in its most basic sense then, is the ability to read, write and speak. Examining the root meaning of literacy offers a reminder that communication skills play a role in financial literacy. Still, higher-order competencies, such as being able to calculate numbers and understand basic economic concepts, are also necessary to become financially literate. Learning to manage money, then, involves a more complicated path and goal than learning to simply read, write and speak.

Both of the reading literacy organizations lean heavily upon the word ability in their definitions. This is consistent with the findings of several researchers who have identified the importance of qualities such as self-efficacy and confidence in developing financial literacy (Chen and Volpe 2002; Danes and Haberman 2004; Emmons 2005).

Nominal Definitions

Confounding the goal of a common definition of financial literacy is the variance in nominal definition, or the many different names and phrases used to describe financial literacy. The alternatives in contemporary scholarly and financial industry research include empowerment (Jekwa 2007), responsibilization (Williams 2007), financial capability (Johnson and Sherraden 2007; Stone, Wier and Bryant 2008), credit literacy (Lyons, Rachlis, and Scherpf 2007), financial knowledge (Howlett, Kees, and Kemp 2008; Stone, Wier, and Bryant 2008; U.S. Department of Treasury 2006) and economic literacy (Vitt et al. 2000).

Financial capability has recently been introduced as the next possible iteration of the financial literacy concept. A few scholars have argued that knowledge is of little value without ability or skills. Johnson and Sherraden (2007, p. 122) provide an eloquent and effective definition of financial capability: "Participation in economic life should maximize life chances and enable people to lead fulfilling lives; this requires knowledge and competences, ability to act on that knowledge, and opportunity to act." Making the case that people also need the opportunity to put their knowledge and skills to the test hints at social equality and requires more than an individual can achieve on one's own.

The most intriguing of the alternative names offered for the phrase financial literacy include empowerment (Jekwa 2007), used in developing African nations, and responsibilization, used in Europe to describe "a form of regulation by which the state holds individuals accountable for aspects of market governance and social security that it used to provide" (Williams 2007, p. 227). The U.S. National Strategy for Financial Literacy does not explicitly address responsibility, but it does speak to empowerment: "Financial literacy can empower consumers to be better shoppers, allowing them to obtain goods and services at lower cost. This optimizes their household budgets, providing more opportunity to consume and save or invest" (U.S. Department of Treasury 2006: Foreword Part 1, p. V).

None of the alternative names seems an appropriate substitute for financial literacy, especially given the scope of most financial literacy programs. Empowerment, economic understanding and other such terms allude to deeper outcomes that would be difficult, if not impossible, to achieve through traditional training and communication programs.

Recommended Conceptual Definition

The previous review sheds light on the need for a more consistent conceptual definition of financial literacy. The following synthesized definition draws upon the key concepts identified thus far in this study:

> Financial literacy is a measure of the degree to which one understands key financial concepts and possesses the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions.

In short, knowledge drives aptitude, which in turn influences how one manages money. Knowledge is worthless without applied experience, and research has shown that experience forms the bridge between knowledge and aptitude (Hilgert and Hogarth 2002). All of these interrelated factors are at play within the framework of one's life events and broader economic conditions. Collectively, these dimensions drawn from existing research studies create a holistic picture of what financial literacy truly is, conceptually speaking.

How does this conceptual definition of financial literacy compare with the one introduced by the Jump$tart Coalition for Personal Financial Literacy and embraced by the United States government? That definition reads:

> Financial literacy is the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being.

This definition stresses the importance of ability, and it speaks to knowledge, skills and life changes. However, the definition used by Jump$tart and federal officials falls short on several points. First, it does not explicitly state that financial literacy is a measure. How can researchers and educators work toward greater literacy without measuring it and reexamining that measure across various populations and over periods of time? Second, the existing definition does not explicitly state the key financial concepts a person needs to understand to be considered financially literate. How can researchers and educators agree on what to study and teach if a clear road map is not provided? The next section of this study will address the key concepts of financial literacy and how to measure them. Finally, the existing definition does not stress the importance of decision making and planning, nor the influence of an increasingly complex and volatile economy.

These shortcomings would impede the purpose of the remainder of this study, which is to translate the abstract conceptual definition of financial literacy into measurable criteria. For that reason, the next section of this study draws upon the alternative definition developed in the first section of this study, rather than the more abbreviated definition developed by Jump$tart and adopted by the U.S. government.

Operational Definitions

An operational definition clearly explains how to take an abstract concept—such as financial literacy—and measure it in tangible ways. The National Strategy for Financial Literacy, which has embraced a conceptual definition, still lacks an operational definition. This gap makes it difficult to compare financial literacy across and within various subpopulations.

Many research studies and outreach programs do not provide an in-depth operational analysis of the financial literacy concept. Conclusions might simply be drawn from socioeconomic data, such as household income, spending habits or a person's debt–asset ratio, or from demonstrated behaviors, such as homeownership or savings toward retirement. The former fails to analyze the individual's financial literacy or perceived sense of financial literacy; the latter does not consider extenuating factors such as health, dependents and other life events and circumstances.

Researchers need a more consistent and explicit way to operationally define and measure financial literacy. The detailed conceptual definition of financial literacy developed in the first part of this study is used as a framework to analyze how researchers have tried to operationalize, or measure, financial literacy. The analysis draws from literature already cited in this study, along with additional research reports that discuss how to measure financial literacy without ever actually defining the concept.

Operationalization in Previous Studies

Surveys and polls seem to be the preferred method among American researchers to measure financial literacy. Although a few researchers have used custom-designed instruments (Chen and Volpe 2002; Lusardi and Mitchell 2007), most rely upon one of a handful of national benchmark surveys, including:

- Jump$tart Coalition for Personal Financial Literacy (beginning in 1997): Annual survey of high school seniors, representative of the national population: thirty-three multiple-choice questions (Braunstein and Welch 2002; Fox, Bartholomae, and Lee 2005; Norvilitis et al. 2006).
- University of Michigan (2001): Survey of consumers aged 18 and above, representative of the national population: twenty-eight true/false questions (Braunstein and Welch 2002; Emmons 2005; Hilgert and Hogarth 2002; Lusardi and Mitchell 2007).

Although not referenced as often in scholarly literature, a few other surveys deserve mention:

- National Foundation for Credit Counseling and MSN Money (2008): Survey of consumers aged 18 and above: twenty-seven questions (National Foundation for Credit Counseling 2008).
- *USA Today*/National Endowment for Financial Education (2006): Telephone poll of American adults, representative of young adults aged 22–29 nationwide: thirty questions (National Endowment for Financial Education 2006).
- National Council on Economic Education (2005): Survey of high school students and adults representative of national population: twenty-four questions (Lusardi and Mitchell 2007).
- Retirement Confidence Survey® (1996): Comprehensive study of the attitudes and behavior of American workers and retirees. Random, nationally representative survey of 1,000 individuals aged 25 and above, conducted annually.

- Test of Economic Literacy (1978–present): Closest equivalent to a standardized worldwide measure of financial literacy: forty-six multiple-choice questions (Williams 2007).

The U.S. government's *Taking Ownership* National Strategy for Financial Literacy references surveys conducted separately by North Carolina State University, Federal Deposit Insurance Corporation, U.S. Department of Agriculture and the National Bureau of Economic Research. However, although the publicly released documentation about the strategy mentions the surveys, it provides no operational measures (U.S. Department of Treasury 2006). Further, comparing scores across surveys would be meaningless because the constructs and evaluation criteria have not been disclosed.

A few studies have used pre- and posttest evaluations to assess financial literacy. A law school, for example, piloted a two-day, pass–fail financial education workshop for its students, with pre- and posttest surveys containing fifty-eight custom-designed, forced-choice questions about various financial topics (Gross, Ingham, and Matasar 2005). In another study, researchers created a simulated 401(k) plan enrollment meeting, complete with stimulus materials about the hypothetical 401(k) plan and investment options. A posttest evaluated participants' desire to enroll in the plan, the percent of salary they would like to defer and other plan-related decisions (Howlett, Kees, and Kemp 2008). The operational variable was the percentage indicating an understanding of a certain financial concept, or a stated intent to make a decision or behave in a certain way because of the hypothetical meeting.

A study conducted within a medium security correctional facility provides a strong example of how existing financial literacy assessment methods could be applied consistently in future research. In this particular study, seventeen inmates voluntarily chose to participate in a financial literacy class and related research study. The inmates ranged in age from 20 to 61. Researchers used a modified version of the Jump$tart test. The average level of financial literacy, as measured by correct answers, increased from 66% to 74%, based on pre- and posttest evaluations (Koenig 2007). The largest score increases were in understanding credit cards, insurance and retirement, presumably all financial matters that are not commonly discussed within the prison walls. This study indicated that it is possible to use an existing survey tool, in combination with controlled exposure to educational messages or lessons, to gauge the effect of a financial literacy initiative.

Categories of Operational Definitions

Arriving at operational definitions of financial literacy required a reexamination of the studies containing conceptual definitions, as well as additional studies that did not include conceptual definitions. In fact, few studies since 2000 have both conceptual and operational definitions of financial literacy.

Based upon this secondary review, the operational definitions of financial literacy most commonly used in contemporary research fell within four categories—budgeting, saving, borrowing and investing—all of which are behavior or ability based (Chen and Volpe 2002; Financial Fitness for Life 2008; Jump$tart Coalition for Personal Financial Literacy 2008; National Endowment for Financial Education 2006; National Foundation for Credit Counseling 2008; U.S. Department of Treasury 2006). Other dimensions that do not fall cleanly into the four categories include understanding and buying insurance (Chen and Volpe 2002; Morton 2005; Wi$eUp 2008); recognizing and avoiding abusive lending programs (National Foundation for Credit Counseling 2008) and homeownership counseling (National Endowment for Financial Education 2006; National Foundation for Credit Counseling 2008). A case could be made to identify other concepts such as asset transfer as pillars of how to evaluate and assess financial literacy (Hira and Schuchardt 2008). As with earlier examples, semantics come into play. Managing risk is an essential element of borrowing and investing, and estate planning and asset transfer can, to some degree, be integrated with saving and investing practices. The experts should refine, expand or collapse the key concepts of financial literacy, as appropriate. That point is stressed in the conclusion to this study. To provide a common starting point, though, the four categories of operational definition identified thus far—budgeting, saving, borrowing and investing—serve an effective purpose.

Operational Variables

Indeed, the four most common categories of operational definitions could appropriately serve as the framework for operational variables in future research. Converting these broad variables to specific, measurable criteria might involve integrating an equal number of questions about the four subtopics to paint a robust picture of one's financial literacy. Or, operationalization could involve a study or survey focusing on just one aspect of financial literacy, with concurrent or subsequent studies or surveys to test other variables. Indeed, to be financially literate requires knowledge, skills, motivation and confidence in more than just one area of personal finance and money management. Researchers and educators must not lose sight of this fact.

Scholarly researchers have, in some cases, already operationalized financial literacy variables to focus on one subtopic. For example, Lusardi and Mitchell (2007) developed a health and retirement survey for early baby boomers. They surveyed 1,700 adults ranging from age 51 to 56 on financial matters specific to health and retirement but covering the subtopics of budgeting, saving, borrowing and investing. Studies such as these that look at specific subtopics or variables could then be aggregated to create a composite measure of financial literacy.

Indeed, the operational definitions of budgeting, saving, borrowing and investing should be used as operational variables. They move beyond trying to assess broad knowledge or awareness of financial matters to evaluating aptitude in managing specific aspects of personal finance. These operational measures also help researchers understand the dynamics of aptitude, which may include short-term decision making, long-range planning, understanding the financial implication of life events and making sense of the possible financial impact of economic conditions beyond one's control. These important facets were incorporated into the recommended conceptual definition of financial literacy provided in the first section of this literature review.

Operational Values

More clearly defined operational values should help financial literacy research and programming move forward more efficiently and effectively. The existing surveys described earlier in this study targeted a mix of high school students and adults, using myriad constructs. Composite scores for student surveys range from 48% of answers (Jump$tart) to 52% (National Endowment for Financial Education) correct. For adults, the range is much broader, from as low as 53% of answers (National Council on Economic Education) to 81% (University of Michigan) correct. Comparatively, then, the average score for students—48% to 52%—is much narrower than what is known for adults—53% to 81%. Researchers must use common operational values and similar constructs so that comparing scores from study to study has meaning and significance.

Even less clear than the measurement of a person's overall financial literacy is the average impact on financial literacy created by the introduction of an independent variable such as a training workshop or communications campaign. A 2005 experimental study using pre- and posttest evaluation showed a spike in financial literacy among students of more than 20%, jumping from 66.5% pretest to 86.8% posttest (Gross, Ingham, and Matasar 2005). Conversely, a similar experiment with a controlled adult group—specifically, inmates in a correctional facility—showed a much more modest 8% increase (Koenig 2007).

The pre- and posttest use of the Jump$tart survey among the controlled study of inmates is likely the most clear indication of the strength of correlation between outreach and improvement. Inmates have minimal external influences, which should theoretically reduce the number and impact of confounding variables. They live in a controlled environment, though, so financial activity is limited. Still, the finding of an 8% spike could be at least a starting point for identifying a target goal for general financial literacy knowledge in future research. Spikes of more than 20%, such as the one recorded in the 2005 Gross, Ingham and Matasar study, simply may not be realistic or repeatable.

Variable-specific testing may help researchers zero in on the most meaningful data. One study of Jump$tart results revealed that for the financial decisions high school students most immediately face, formal instruction provided no boost in financial knowledge (Mandell and Schmid Klein 2007). A separate study in 2008 used a self-designed survey instrument to assess knowledge, skills and behaviors related to financial literacy. The survey included yes/no questions about basic money management topics such as saving money each month (behavior) and knowing that mutual funds have risk (knowledge). Mean scores for these variable-specific items ranged from 12% to 87% (Servon and Kaestner 2008), revealing true gaps in literacy and knowledge. Variable-specific scores, therefore, may provide richer data and more meaningful insight than attempts at a general, all-inclusive financial literacy score.

Recommended Operational Definition

Based upon a review of research studies since 2000, the four most common operational definitions of financial literacy are budgeting, saving, borrowing and investing. That taxonomy fits within the expanded conceptual definition proposed and articulated in the earlier section of this study, as well as the less-detailed conceptual definition already in use by the Jump$tart Coalition and the U.S. government.

Looking toward future research, the *USA Today*/National Endowment for Financial Education (2006) survey used to assess young adults provides a solid model. The methodology and survey instrument assess the degree to which one understands key financial concepts and the degree to which one feels she or he has the ability and confidence to manage personal finances. These qualities ensure that the survey design supports the conceptual definitions described earlier in this study. Moreover, the survey questions encompass the four most common operational definitions of financial literacy, namely budgeting, saving, borrowing and investing.

The development and validation of a benchmark survey for all adults, similar to the *USA Today*/National Endowment for Financial Education instrument for young adults, would serve future researchers well. Such a tool would provide a common baseline for evaluation and comparison of financial literacy, and do so through the four primary operational variables. As noted earlier, additional measures for risk management, asset transfer and other financial management variables could be added.

The establishment of a more narrowly defined baseline financial literacy score for adults is imperative. Student scores, as noted earlier, range from 48% to 52% of answers correct; however, adult scores can stretch from 53% to as high as 81% of answers correct. With no common, underlying construct and such a wide range of scores, what is considered an acceptable or good level of financial literacy? Developing and testing a national benchmark survey would help establish a more narrow range of values for what is an acceptable or at least average level of financial literacy.

DISCUSSION

This study was designed to analyze how financial literacy has been interpreted and measured by researchers since 2000. The National Strategy for Financial Literacy got off the ground during this timeframe. Although the U.S. government and the Jump$tart Coalition for Personal Financial Literacy now adhere to a common conceptual definition, many researchers do not. Moreover, there is seemingly no common ground when it comes to operationalizing, or measuring, financial literacy in research studies and education programs. Through analysis of existing research, this study has identified a crucial need for researchers to employ clear, consistent criteria when defining and measuring financial literacy.

Americans would certainly benefit from greater knowledge and self-efficacy relative to personal finance. However, it will remain impossible to evaluate and assess financial literacy in America until officials, researchers and other experts embrace common conceptual and operational definitions.

Building consensus will be difficult. Can those who research and champion the concept of financial literacy truly reach common ground? How? Would such an effort truly make any difference in the lives of consumers or those who educate or serve them?

In October 2008, the Financial Literacy and Education Commission convened the National Research Symposium on Financial Literacy and Education, a call to action outlined in the *Taking Ownership* National Strategy for Financial Literacy (U.S. Financial Literacy and Education Commission 2008). The top two priorities determined by this panel of experts were as follows:

1. What are the core principles of personal finance that every consumer needs to know, and what evidence exists that current standards are effective in helping people reach their financial goals?
2. What are reliable and valid measures of the success for financial education, and what measures should be used to document success for various financial topic areas and target audiences?

The first priority speaks to the need for a shared conceptual definition of financial literacy; the second addresses the need for shared operational definitions. A critical next step is for a coalition of leading researchers to address and answer these important questions.

The review of research contained in this study could provide a solid starting point for discussion and debate among leading researchers. On the one hand, officials support and use a broad conceptual definition, but the research community does not. The existing conceptual definition speaks to ability, knowledge and skills, but makes no attempt to articulate what aspects of money management actually constitute a person's financial literacy. Meanwhile, financial literacy officials and advocates have not agreed to operational definitions, leaving researchers free to define and measure financial literacy, however, they best see fit. These problems must be addressed.

The value of public policy, education programs and other efforts to improve financial literacy will be limited until a body of researchers and experts, under the guise of the Financial Literacy and Education Commission and its national symposium, take charge. Conceptual and operational definitions should be clearly defined and issued. Some studies may need to be revisited, and new studies may be needed to validate the merits of consistent conceptual and operational definitions. Success will be reflected in future research that is grounded in common principles and measures, making it possible to compare results and conduct longitudinal studies that provide true enlightenment.

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