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Do Financial Education Programs Work?

by Ian Hathaway and Sameer Khatiwada

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In this paper we provide a comprehensive critical analysis of research that has investigated the impact of financial education programs on consumer financial behavior. In light of the evidence, we recommend that future programs be highly targeted towards a specific audience and area of financial activity (e.g. home-ownership or credit card counseling, etc.), and that this training occurs just before the corresponding financial event (e.g. purchase of a home or use of a credit card, etc.). Similarly, in light of a lack of evidence, we also recommend that program evaluation be taken as an essential element of any program, and that it be included in the design of the programs before they are introduced.

Key words: financial education, financial literacy, consumer finance.

JEL codes: D12, D14

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1. Introduction

Conventional wisdom tells us that a more informed consumer is a better consumer. One could reasonably argue that when dealing with complex goods and services (such as those of a financial nature), consumer knowledge is particularly important. Given the recent public policy debate about whether consumers are being taken advantage of by various financial services firms, financial education programs are likely to be one popular remedy. But, one must ask if financial literacy (i.e., a comprehension of particular financial products) allows those consumers with more of it to achieve better outcomes than those with less.[2] It further begs the question that if in fact financial literacy does lead to better consumer outcomes, do financial education programs actually lead to greater financial literacy? Or, combined, do financial education programs work?

To answer this question, we provide a comprehensive critical analysis of research that has investigated the impact of financial education programs on consumer financial behavior. Our hope is to move the practice of financial education forward by highlighting what we know and what we don't know about what works and what doesn't, and to recommend areas and approaches for improvement. The framework within which we have organized our analysis will give readers a solid understanding of the current state of affairs in this field.[3]

The "theory" of financial education goes something like this: holding all else equal, financial education leads to greater financial knowledge, greater financial knowledge then leads to better financial behavior, and better financial behavior ultimately leads to improved consumer outcomes. Indeed, the cornerstone for the argument in favor of financial education rests squarely upon the validity of these links. However, largely, to our knowledge, these links have merely been assumed as given by financial education programs. The fundamental purpose of this paper is to confirm whether this seemingly intuitive

[2] Note that we use the terms "financial literacy" and "financial knowledge" interchangeably
[3] Figure 1 depicts this framework graphically

argument holds in reality.

To do this, we take two approaches. First, working backwards in our framework, we explore any links between financial knowledge and financial behavior, and ultimately, financial outcomes. We then examine studies that attempt to measure the effectiveness of some previously administered financial education programs. These studies have focused on four types of programs: homeownership counseling, credit card counseling, school-based financial literacy classes, and workplace financial education programs (most of which focus on retirement planning).

Taken together, the literature does not succeed in establishing the extent of the benefit provided by financial education programs, nor does it provide conclusive support that any benefit at all exists. The reason is not clear, but could only be one of three culprits: either (a) financial education simply does not work, (b) financial education does work but the programs are not effective at transferring knowledge (i.e. poorly designed programs), or (c) financial education does work and the programs are properly designed, but program evaluation techniques are not yet adequate in capturing these effects. We believe that option (a) is unlikely, and that some combination of (b) and (c) is more likely. Either way, it is clear that more extensive program evaluation and further research are much needed.

Given the evidence available, we offer two suggestions for improving the impact of financial education programs on consumer behavior. First, while the overall evidence in favor of financial education remains unclear, we do see a pattern that highly targeted programs, unlike general programs, tend to be effective in changing people's financial behavior, both in the short run and the long run. As a result, we contend that programs should be highly targeted toward a specific audience and area of financial activity (e.g. home-ownership or credit card counseling, etc.), and that this training occurs just before the corresponding financial event (e.g. purchase of a home or use of a credit card,

etc.). Secondly, we recommend that including formal program evaluation methods in the design of the program itself is critical in being able to measure whether the programs are achieving intended outcomes. As we stated before, the evidence in favor of financial education programs is unclear, and a major reason for this could simply lie in the measurement of impacts. It is critical that we get a handle on what works and what doesn't. Effective program evaluation can do this.

2. Linking Financial Knowledge with Financial Behavior

Here, we seek to determine whether the cornerstone for the argument in favor of financial education holds any validity: that financial knowledge is positively correlated with consumer financial behavior, and that causality runs from knowledge to behavior. The empirical evidence described in this section appears to confirm this supposition. Establishing that causation runs from financial knowledge to financial behavior and ultimately to credit outcomes is also critical because most financial literacy programs and the studies that evaluate their effectiveness merely assume this causal link, and perhaps don't consider the possibility of dual or reverse causality. This section lays the groundwork for the remainder of our analysis.

Some of the studies described in later sections of this paper find, to varying degrees, a positive relationship between financial education and financial outcomes. The problem is, though, that most of the authors assume a causal relationship where there is (often weak) correlation. There is a big difference between these two, and confusing correlation with causality is a critical flaw. Although there is clearly a *correlation* between knowledge and behavior in personal finance, it may be that *causality* runs both ways.

Hilgert, Hogarth, and Beverly (2003) provide some support for a link between financial knowledge and better financial practices. Using monthly survey data from the University of Michigan's Surveys of Consumers, the

authors construct indexes that represent the level of households' participation in each of four financial management practices: cash flow management, credit management, saving, and investment. The index values reflect participation rates by individual households in activities attached to each of the four financial management practices. For example, if a household participated in four of five activities related to credit management, the index value would be 80, and so on. The index values across households were highest for cash flow management and lowest for investment. Credit management ranked second while saving came in third.

Having established household financial behavior in the first step, the authors next use results from a quiz taken along with the households' responses in the Surveys of Consumers, to measure a household's "knowledge" of four different financial management practices: credit management, saving, investment, and mortgages. Because three of these overlap with measures taken during the first half of their analysis, the authors are able to run correlates between "behaviors" and "knowledge". The authors conclude that greater knowledge about credit, saving, and investment practices is each correlated with the corresponding index scores behaviors.

Courchane and Zorn (2005) sought to go beyond basic correlations between knowledge and behavior, by attempting to find a causal link. In short, they appear to have done so – by linking financial knowledge to financial behavior, and then linking financial behavior to credit outcomes. The data they collect comes from an extensive consumer credit survey, a comprehensive demographic data set held by private marketing firms, and individual credit profiles from Experian. They then use a three-step recursive model regression analysis to establish these links.[4]

In the first step, the authors estimate two separate regression equations:

[4] Figure 2 depicts this model graphically

one with their measure of subjective knowledge as the dependent variable and the second with their measure of objective knowledge as the dependent variable. The subjective measure is based on survey respondents' self-assessment about what they know, while the objective measure is derived by the authors from specific financial questions answered by respondents. These measures of subjective and objective knowledge are separately regressed on a set of variables that are assumed to affect financial knowledge. As a result, each dependent variable becomes a function of the independent variables (those that are assumed to affect knowledge). These predictors include: demographic and personal attributes (reference variables), income and wealth characteristics, and other factors that might affect the attainment of financial knowledge, such as whether they had financial experience (e.g. carried mortgage or educational debt, etc.). The results for both equations indicate significantly positive associations between financial knowledge and each of the following: financial "experiences" (particularly bad events); formal educational attainment; presence of financial education in school; income and wealth; experience using credit cards; and monthly credit card payments (relative to balance).

In the second step, the authors estimate behaviors as a function of financial knowledge (using an interactive variable of subjective and objective knowledge derived from the previous step) and additional factors that affect financial behavior. The dependent variable here is an index value of financial "self control" (savings, budgeting, controlled spending, bill payment habits), which was derived from answers to a series of questions in the survey. To determine which factors had an effect on this financial behavior, variables that were included to explain it fall under four broad categories: income and wealth related, psychological factors, consumer literacy attainment, and demographic attributes. Overwhelmingly, the most important determinant of financial self-control was knowledge. The psychological factors also had an effect, though smaller. In particular, "positive feelings" (optimistic, risk aversion, fewer worries

about money, etc.) had a large and significantly positive effect on financial behavior. Income-related effects were also positive and significant, however the presence of a financial "safety net" and income relative to parents mattered more than actual income or wealth.

In the third and final step, the authors estimate credit outcomes (i.e. the existence or non-existence of "impaired credit") as a function of financial behavior (dependent variable from the previous step) and other factors that affect credit outcomes. These additional explanatory variables fit into one of four groups: spousal/ex-spousal effects, intra-household financial management (i.e. the consistency of financial practices between spouses, responsibility of each spouse), bad financial events as reported in the survey/credit history ("school of hard knocks"), and bad external events (medical or legal problems, bankruptcy, theft, etc.). Here the authors find no additional impact of literacy on credit outcomes beyond those already accounted for earlier, meaning that literacy impacts credit outcomes indirectly through financial behavior. For the first time they do find significant effects from demographic factors (age, kids, gender), in particular those of race, which has the most significant impact of all. This comes as a surprise to the authors in terms of the magnitude of its impact – in particular, that it was the *most* important factor. They observe continued effects from relative income to parents and the existence of a financial "safety net", in addition to factors relating to income and employment uncertainty. Intra-household behavior is also positively significant.

Overall, the authors find that data are consistent with the assumptions made by most financial education program administrators and researchers that attempt to evaluate their effectiveness – that there exists a significantly positive causal link that runs from knowledge to behavior to outcomes. Therefore, to the extent that participation in credit counseling and financial education programs actually affect knowledge (i.e. whether the programs are well-designed – an issue we explore next), they will have a positive impact on financial behavior (i.e.

more financial self-control) which will then have a positive impact on credit outcomes (i.e. less impaired credit).

3. Evaluation of Previously Administered Programs

A number of studies have attempted to evaluate the effectiveness of previously administered financial education programs. The types of programs studied include homeownership counseling, credit card counseling, school-based financial education courses, and workplace-based financial courses. Overall, the results are mixed. Some programs appear to be associated with better financial behavior and outcomes overall, while others seem to achieve better results for specifically targeted financial products or audiences. Some findings seem to contradict others, and some programs look as though they have very little or no impact at all. What is clear, however, is that financial education programs are most effective when they are targeted toward a specific audience or area of financial activity.

Home-Ownership Counseling

Home-ownership counseling falls into two categories: pre-purchase and post-purchase. The studies described below indicate that pre-purchase counseling is effective at lowering delinquency and default rates, both in an absolute sense and in a relative sense as compared to post-purchase counseling. This is likely due to the fact that seekers of post-purchase counseling are already in financial trouble.

According to Mallach (2001), pre-purchase counseling has two beneficial effects: it increases the effectiveness or rationality of the home-buying decision, and it decreases the likelihood of loan delinquency or default. In contrast, post-purchase home counseling is a crisis-driven event, triggered by either missed payments or an increased likelihood of default. Its effectiveness, holding all else

constant, is measured in terms of whether it enables participating home owners to avoid default and foreclosure. While there are studies that attempt to measure these programs' effectiveness on outcomes, as Martin (2007) points out, research in this area remains limited.

Hirad and Zorn (2001) claim that counseling is an effective way of reducing mortgage delinquency and suggest that pre-purchase homeownership counseling can increase the success of affordable lending programs by helping families keep their homes. Using data on 40,000 mortgages originated under Freddie Mac's Affordable Gold Program, the authors show that borrowers receiving counseling have, on average, a 19 percent lower 90-day delinquency rate. However, the effect depends on the type of counseling program: individual counseling programs were associated with a 34 percent reduction in homeowners' 90-day delinquency rate, classroom counseling with at 26 percent reduction, home study counseling with a 21 percent reduction, and telephone counseling with no effect at all. The observation that the success of the program deteriorates with increasing distance between the counselor and the individual suggests that face-to-face interactions focused on each individual's particular needs are the most successful.

Hornburg (2004), on the other hand, provides a comprehensive summary of the studies done on the effectiveness of homeownership counseling and makes a fairly discouraging conclusion: "we know less than we think we do…while the research tools are available, data tracking and collection that would aid impact evaluation is very spotty to non-existent." However, he goes on to say that there are studies that do show that pre-purchase counseling could be effective (e.g. Hirad and Zorn, 2001) and that credit counseling *could* be effective in changing behavior and improving financial characteristics of individuals. Hornburg claims that, in order to better understand the impact of counseling and education, future efforts should broaden success measures and provide testable propositions. The lack of a standardized version of "home-ownership counseling" makes it difficult

to assess the effectiveness of these programs.

Credit Card Counseling

Credit counseling can be seen as having two objectives. The first is to address the client's immediate problem and lower the debt burden (post-crisis), while the second is to improve borrower awareness and planning and budgeting skills in the long run (pre-crisis). Like homeownership counseling, our review found that pre-crisis counseling was more effective at limiting bad credit outcomes or behaviors. Those who received it were more likely to have more responsible credit habits and higher rates of savings.

Elliehausen, Lundquist and Staten (2003, 2007) examine the effect of financial counseling on individuals' credit card behavior. Their study examined the impact of one-on-one credit counseling delivered by five member-agencies of the National Foundation for Credit Counseling, to approximately 14,000 clients in 1997. Credit bureau data provided objective measures of credit performance for these clients over a three-year period following the initial counseling session. The authors are able to form a comparison group that corrects for sample selection biases and holds other factors that impact borrowers' behavior constant.

According to the authors' analysis, credit card counseling leads to several positive outcomes. First, participants see an improved risk profile. This effect is greatest for borrowers with the poorest credit profiles. Second, participants are associated with a reduction in debt levels (total and non-mortgage), the number of credit card accounts with positive balances (total and revolving), and the use of bank cards. Finally, participants enjoyed an improved payment behavior as reflected in lower delinquency rates; however, this effect is less pronounced for clients with higher initial credit scores.

School-Based Counseling Programs

The results for school-based initiatives appear to have met some success,

though limited. While savings rates and financial planning did show improvement as a result of participation in several programs, and students' self-assessments were positive, the causal impact is unclear.

According to Bernheim, Garret and Maki (2001), between 1957 and 1985, 29 states adopted legislation mandating some form of financial education (e.g. budgeting, credit management, checkbook balancing, and investment principles) in secondary schools. The authors use a survey from adults between the age of 30 and 49 (who were in high school during the mandatory consumer education period), to study the impact of the mandated consumer education during high school on savings behavior later in life. States that did not have the mandated consumer education program in high schools are used as a benchmark. The authors say that prior to administration of the program, the states that legislated consumer education programs were not statistically different from the states that did not. In other words, the difference-in-difference effect was negligible, which allows the authors to measure the true effects of the program. The authors find that, compared to adults in states without these mandated programs, adults in states with such programs are associated with increased rates of savings and wealth accumulation during adult lives.

A similar effect of participation on future financial outcomes was found for the High School Financial Planning Program (HSFPP). From a survey of 4,000 students from 188 high schools across the United States who had attended the HSFPP, researchers from the Universities of Minnesota and Wisconsin found that immediately following training, half of the students reported increases in financial knowledge (especially understanding the costs of servicing credit), while a third reported changes in behavior (tracking expenses and better money management) down the road.[5] Within three months after the training, 40 percent of the students reported that they had started saving money and 31 percent

[5] Source: Todd (2002)

reported that they had opened a savings account. Half the students reported no gain in their financial knowledge after the training. Any number of explanations for this is possible, including that they already knew what was taught in the programs.

Gartner and Todd (2005) analyze a randomized study conducted by the Saint Paul Foundation's Credit Card Project that attempted to show whether online credit education led to responsible behavior (prudent credit card usage and spending patterns) among first-year college students. Although they do find that completion of the program correlated with more responsible behavior, the change in behavior between the control and experimental groups is not statistically significant. In other words, this study was unable to find definitive evidence for the effectiveness of online education.

Financial Education in the Workplace

Similar to school-based counseling programs, the impact of financial education programs in the workplace is unclear; but perhaps even more so. While higher participation rates in retirement plans and self-assessed financial behavior improvements were reported, this may have been the result of other factors; namely, the shifting of other savings towards retirement plans, rather than an increase in savings overall. In general, financial education programs geared specifically towards enhancing liquid assets (personal savings) did have a significant impact, particularly among those with lower levels of income.

According to Garman et al. (1999), employees who attended financial education workshops provided by their employers reported positive changes in their financial behavior and stated that their financial decision making had improved. Specifically, they felt more confident when making investment decisions. However, the authors note that self-selection bias may be skewing the results. In particular, because workshop participants were judged to already have better credit management, budgeting, and planning skills than non-

participants prior to the workshops, the same results might not be achieved more generally.

As of 1994, nearly nine-tenths of large employers offered some form of financial education (centered on retirement planning) and more than two-thirds had added these programs after 1990.[6] Bayer, Bernheim and Scholz (1996) examine the effects of employer-based retirement education on 401K activity using firm-level data. They find that retirement seminars are generally associated with higher rates of participation in 401K plans and the effect is particularly strong for non-highly compensated employees.

The authors point to several additional patterns that emerge from their analysis. First, they find that employers provide financial education not to equip their employees with decision-making skills, but to provide general knowledge about retirement planning. Moreover, employers tend to offer financial education on a "remedial" basis, especially when participation in 401K is too low. Secondly, companies with 401Ks are more likely to offer seminars to all employees than companies with defined benefit or other kinds of plans, but less likely to offer seminars specifically to older employees. Third, financial education programs are more common among organizations with multiple retirement plans. Fourth, seminars on financial information tend to rise with the number of employees. Finally, participation in a financial education program is more likely when the participants are offered more investment options.

Bernheim and Garrett (1996, 2003) complement the previous study. They examine data from a household survey to investigate the efficacy of employer-based retirement education. They acknowledge that the employer survey used by Bayer et al (1996) is more reliable; however, it does not contain information on assets held outside of retirement plans. Thus, they argue, a household survey would provide information about the change in financial behavior beyond

[6] Source: Bayer, Bernheim and Scholz (1996)

workplace retirement planning and management.

Based on their household data, the authors draw several conclusions. First, employer-provided financial education has a significant and positive influence on retirement wealth, total savings, and retirement savings. Second, savings rates increase significantly with the provision of retirement education. The effect on savings is most prominent among participants that are least inclined to save. Retirement education significantly stimulates participation in 401Ks and also leads to larger contributions. Workplace financial education is an important factor for retirement savings, but not for total wealth. This is important because it raises the possibility that the financial education that promotes retirement savings may simply cause individuals to shift assets rather than increase overall savings. The authors note that because most employer-provided education programs are new, an insufficient amount of time has passed for there to be a significant impact on total wealth.[7] Next, the effect of employer financial education on the total savings rate is most pronounced among lower-income groups. The 2003 version of this paper shows that all measures of retirement accumulation (both stocks and flows) are significantly higher on average overall, and specifically at the 25th and 50th income percentiles. Lastly, employer financial education tends to displace authoritative sources of financial advice (financial planners and print media) as well as more doubtful sources (friends and family) as the primary source of information on retirement planning.

The authors suggest that their results imply that an aggressive national campaign to promote savings through education and literacy programs could have a significant impact on consumer behavior in general. The study shows that, all else equal, financial knowledge does lead to increases in savings. However, it is important to note that the results of surveys that rely on self-

[7] The 2003 version of this paper shows some evidence that the increased savings represent a net increase and not simply shifting of assets.

assessment from participants tend to be biased or unreliable, and therefore the results must be approached cautiously. For example, Martin (2007) notes that after sitting through over several hours of training, employees are likely to say that they learned at least something.

According to Muller (2002), retirement education increases the probability that persons under the age of 40 will save a lump sum distribution for their retirement account by 27 percent, but financially vulnerable groups do not show any increase. Lusardi (2003) finds that retirement education increases liquid wealth (savings) by approximately 18 percent and that most of this impact is driven by those at the bottom of the income distribution. The bottom quartile benefited the most from the financial education because liquid wealth for this group increased by 70 percent. Furthermore, the author accounted for the presence of pension and Social Security wealth to show that the effect of retirement education on household wealth is still significant, but that it is now more even across different income levels.

4. The Way Forward

The Importance of Highly Targeted Programs

While the overall evidence in favor of financial education remains unclear, we do see a pattern that highly targeted programs, unlike general programs, tend to be effective in changing people's financial behavior, both in the short run and the long run. For example, we have seen that education programs geared specifically toward helping workers manage and plan for retirement yield desired changes in participants' behavior. Similarly, pre-purchase home-ownership counseling targeted toward people who are ready to buy a new home is effective in lowering the delinquency rates. Even training in basic financial decision making skills can be effective when targeted towards households with lower levels of income and education. Therefore, we recommend that financial

education providers carefully consider how to best tailor their program goals and teaching methods to their particular audiences. We review two studies that provide some guidance on such targeting.

Anderson, Zhan and Scott (2004) focus on program design for the low-income population. They argue that financial education providers should target their instruction to the resources typically available to low-income households (labor income and welfare benefits) and the issues that affect them financially (e.g., tax considerations). The authors say that financial education programs that focus on public and work-related benefits and predatory lending practices are most useful for this group. Basic training on savings and investment is also helpful. Furthermore, because public benefits vary by state and local jurisdictions, financial education providers must be knowledgeable about those available to their clients.

The authors caution that client needs are quite diverse, even among low-income households, and that needs assessments should be conducted at the beginning of any program. The authors also suggest that providing participation incentives might aid efforts to recruit more participants. For example, individual development accounts (IDAs), which match savings to those of the participants, are quite helpful, but of course are costly to the program. The authors say that inexpensive incentives, such as the provision of a certificate of completion, small graduation ceremonies, minor cash rewards, or shopping certificates might also do the trick.

Lyons, Chang and Scherpf (2006) suggest that financial education providers distinguish between behaviors that can be changed in the short run versus behaviors that require fundamental changes in other aspects of participants' lives, and that they target training on the former. They argue that such an approach is effective because behaviors that can be altered in the short-run are easier to impact. Moreover, once these short-run behaviors are changed, they translate into positive results in the long-run as well.

The Need for Program Evaluation

Existing research on the effectiveness of financial education programs is incomplete and unconvincing. One likely culprit for this is a lack of programs that properly conduct evaluations to measure impact and effectiveness. Many researchers have discussed the need for improved program evaluation; arguing it should be better planned, planned earlier, and conducted as an integral component of every program. We review two of these studies here.[8]

Program evaluation requires real resources, which may be out of reach to those organizations that rely on modest funding. Moreover, it is a highly sophisticated process and requires a certain technical expertise. In addition to a general lack of evaluation capacity (time, staff, expertise, and resources), Lyons, et al (2006) note that organizations are hampered by the fact that there are really no industry standards for program evaluation. These authors argue that a consistent and standard approach to program evaluation would help to identify best practices, improve program effectiveness, and lead to policies that help consumers make better decisions. They also argue that because evaluating the effects of a program is critical to improving its effectiveness and demonstrating its value, program administrators and underwriters should understand its importance and insist that it be a component of every program.

Program evaluation is best planned in the initial design of the literacy program. This is especially important for large programs (in terms of funding and participation). Most programs treat evaluation as an after-thought, which then leaves them in a difficult situation whereby a sound evaluation is not realistic. Furthermore, it may bias the results. If administrators are able to choose what the outcomes should be *after* the program, then they would have the incentive to choose outcomes that make the programs look better. These needn't

[8] See Lyons, Palmer, Jayaratne, and Scherpf (2006) for a thorough discussion of financial education and program evaluation.

necessarily be the same as those that were most important at the outset. Therefore, outcomes and program goals should be defined ahead of time. During the initial stages of a program where a needs-assessment is carried out, evaluation should also be a part of the management strategy.

Lyons et al. (2006) argue that a careful assessment of a financial education programs must both specify the behaviors that the knowledge provided in the program is expected to change, and tailor program measures to the target group. The authors further say that results must be interpreted carefully and program evaluators should "focus more on examining outcomes that are less tied to individuals' financial situations and more to whether individuals are able to make sound decisions regardless of their financial situation." Moreover, the authors show that financial education has the most impact on behaviors that are independent of an individual's financial situation. This means that program impact could be misleading if the correct set of outcomes are not accurately identified.

As Lyons, et al (2006) argue, there are considerable differences between programs in terms of what is being measured and how it is being measured. In order to isolate the effects of a literacy program, we need to control for inputs, process and outputs. We need to compare outcomes rather than outputs. Unfortunately, people often confuse the two. For example, the number of participants in a literacy program is an output, while changing people's financial behavior is an outcome. Furthermore, we need to compare outcomes from programs that have similar inputs, processes, and outputs. As we have seen in the literature, there are plenty of proxies for measuring outcomes, and we need to look at them to understand and assess the effectiveness of literacy programs.

While the diversity of programs makes standardization of evaluation methods difficult, we believe it is possible to define a standard but adaptable framework that will accommodate all types of literacy programs. Fox, Bartholomae and Lee (2005) provide one such framework, which has been tested

in the MoneyMinded program in Australia.[9]

The authors describe five major steps they believe should be included when evaluating financial education programs: pre-implementation (and needs assessment), accountability, program clarification, progress towards objectives, program impact. In the pre-implementation stage, the target group is identified, needs are assessed, and goals are specified. Administering literacy tests on the target group is a good proxy for a needs assessment. General indicators of needs could be high rates of non-business bankruptcy filings, defaults on loans, and high consumer debt levels, among others. The accountability stage involves the collection of information on education and services provided, program cost, and basic information on program participants. The objective here is to determine who has been reached by the program and in what way; that is, whether the population in need is the population actually served. The program clarification stage helps the program planners review an ongoing program's goals and objectives and assess whether these goals and objectives should be revised. Next, the progress towards objectives stage involves obtaining objective measures (quantified data) of the impact of the program on the participants, and how those impacts relate to program goals. Finally, the program impact stage involves an experimental approach (comparing sample and control groups) to assess both the short-term and long-term effects of the program. Information collected in the previous stage (progress towards objectives) helps assess whether there were long-term and short-term effects. According to the authors, there is scarce evidence of evaluation of financial literacy programs at the final stage (program impact) because most financial education programs do not include impact evaluation as a component of their program design.

5. Conclusions

[9] For more on the MoneyMinded program, see Russell, Brooks, and Nair (2007)

So, do financial education programs work? The answer is: we can't say for sure one way or the other.

Working backwards in our framework (see Figure 1), it does appear as though financial knowledge (i.e., financial literacy) does in fact lead to better financial behavior. This of course brings us to the question of whether those who are financially illiterate (i.e. lacking knowledge) are able to fill these knowledge gaps with financial education programs. Unfortunately, we do not find conclusive evidence that, in general, financial education programs do lead to greater financial knowledge, and ultimately, to better financial behavior. However, this is not the same as saying that they do not nor could not – it is just that current studies, while at times illustrating some success, leave us with an unclear feeling about whether we can grant a blanket application of these results specifically, to financial education programs more generally.

There are two likely reasons that we don't see the conclusive evidence on the effectiveness of financial education programs that we are looking for. One possibility is that the programs are simply not effective at transferring knowledge. That is, it is not that financial education programs *could not* work, but rather, it is that they *do not work*, perhaps because they are poorly designed or administered. A second explanation is that because the formal evaluations of the programs that we examined earlier were completed *ex post*, it is the inability of these evaluations to capture whether the programs worked or not. The point here is that we just don't know if the programs are not working or if we just don't understand whether they are working because they are not being evaluated properly.

In light of this, we offer two suggestions for improving the impact of financial education programs on consumer behavior. First, while the overall evidence in favor of financial education remains unclear, we do see a pattern that highly targeted programs, unlike general programs, tend to be effective in changing people's financial behavior. As a result, we contend that programs

should be highly targeted toward a specific audience and area of financial activity (e.g. home-ownership or credit card counseling, etc.), and that this training occurs just before the corresponding financial event (e.g. purchase of a home or use of a credit card, etc.).

Secondly, we recommend that including formal program evaluation methods in the design of the program itself is critical in being able to measure whether the programs are achieving intended outcomes. As we stated before, the evidence in favor of financial education programs is unclear, and a major reason for this could simply lie in the measurement of impacts. It is critical that we get a handle on what works and what doesn't; effective program evaluation can do this.

Finally, we note that research on effectiveness of financial education is relatively new, and thus limited. Similarly, it hasn't been until recently that we have seen important advances in better understanding household financial decisions; that is, how households decide how much to spend, how much to save, how to invest that savings, and ultimately, and how to finance these investment portfolios through some combination of income and borrowing.[10] Progress on research in these areas is important because we need to understand how consumers behave and how they make decisions in the area of personal finance. Understanding this is critical in order to design programs that will influence these behaviors for better financial outcomes. Similarly, better understanding what works and what does not in financial education programs, through program evaluation and experimentation, is crucial in successfully filling financial knowledge gaps.

[10] For more, see Campbell (2006), Guiso, Haliassos and Japelli (2002), and Athreya (2007)

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FIGURE 1

Effectiveness of Financial Education

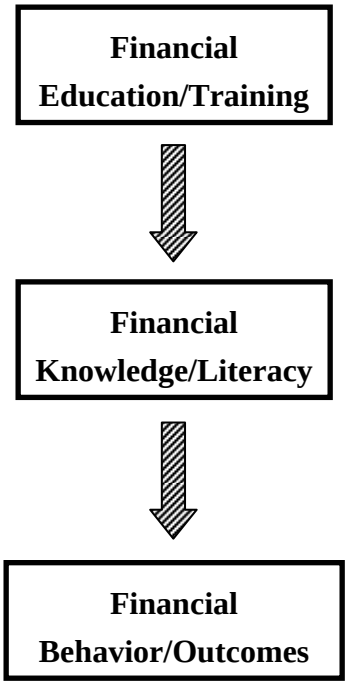
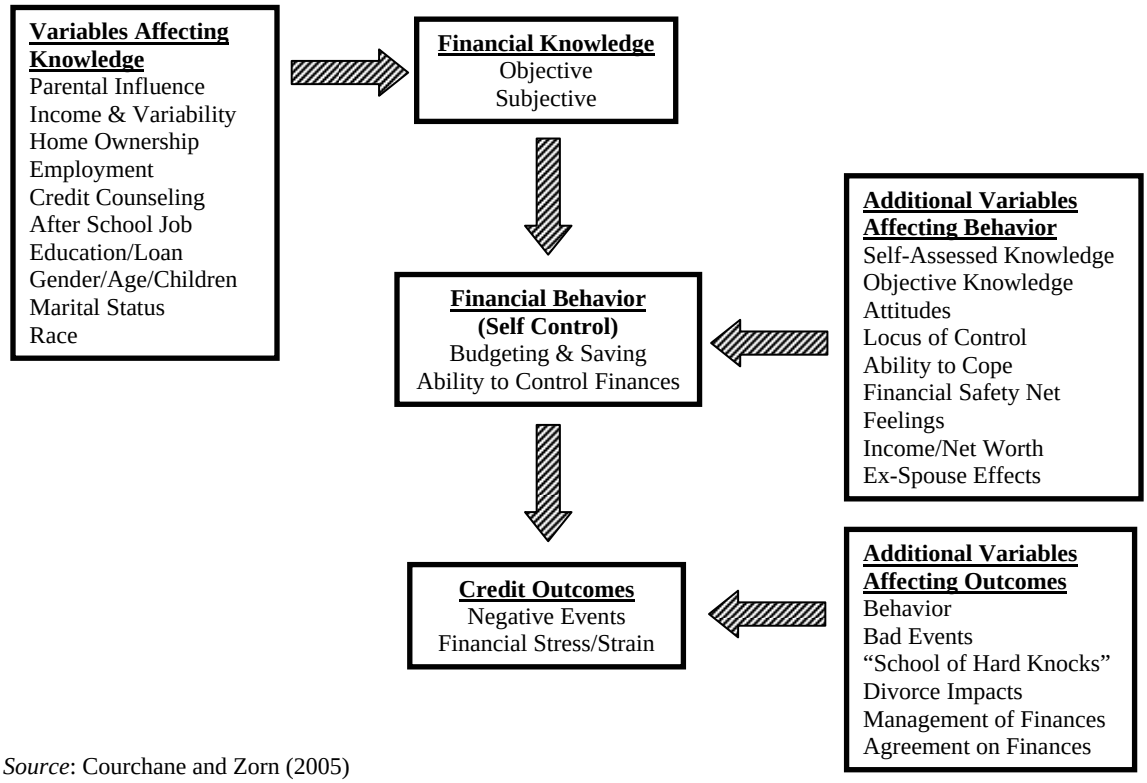


FIGURE 2

Model of Creditworthiness



Source: Courchane and Zorn (2005)