

## Getting Serious about Financial Literacy: One State's Approach

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Although several states have adopted or are considering mandatory financial education classes at the high school level, this paper argues that such approaches to financial literacy are insufficient. An expanded definition of financial literacy and treating it the same as other disciplines necessitates starting financial education in the elementary grades. The Smart Tennessee program is used as an example of how a comprehensive, statewide program was instituted and institutionalized. Results from four years of the program are also presented.

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### INTRODUCTION AND OVERVIEW

One of the many consequences of the financial crisis of 2007-2009 is an increased awareness of the importance of financial literacy, both on a personal, individual level, and as a matter of public and educational policy. As of 2009, 13 states require students to take a personal finance course as part of the graduation requirement; 9 states require students to be tested on personal finance concepts (Council for Economic Education, 2009).

The research on the effectiveness of these high school initiatives is not conclusive. While some suggest that high school students gain little to no knowledge as a result of financial education courses (Mandell, 2008; Peng, et al., 2007), other studies conclude that gains are significant (see, for example, Waldstad, et al., 2010).

The purpose of this paper is not to summarize the literature on the effectiveness of states' implementation of high school financial education; nor is it to add to that literature with alternative specifications, data sets and/or methodologies. Rather, the purpose of this paper is to provide a case study of a K-8 financial literacy program that has been successful in Tennessee. Effective elementary and middle school programs are important because they can provide needed foundational knowledge for the increasing number of high school courses. This focus is not to suggest that high school efforts have

been misplaced, but rather that financial literacy education prior to the high school course can solidify states' efforts in this area. Or stated another way, the focus on high school students is a necessary, but not sufficient condition for a state's financial education efforts.

In the sections that follow, I describe Tennessee's K-8 program, as well as its implications for how financial literacy education is implemented. Therefore, the objectives of this article are to describe a program and strategies that could be used in other states, as well as to suggest that an expansion of how financial education is perceived can strengthen states' initiatives.

### **IT'S NOT WHAT YOU KNOW...**

State implementation of a required financial education class in high school is often done amid much fanfare and seen as evidence of the seriousness and importance placed on financial literacy by the state's public officials. While the existence of such requirements is certainly better than no requirement, it implies something about financial education that is unique. If we deem that one course (usually one semester) in high school is sufficient for students to be adequately prepared to deal with the financial decisions they are likely to encounter, then we have implicitly accepted that either students do not need any a priori exposure to financial education before they take this course; or that they do need a priori experience, but already possess it.

If we assume that a high school financial education course requires no previous exposure or experience with the subject matter in order for the course to be effective, we are placing it in a unique category. We make no such assumption regarding any other high school offering. Curriculum planners, educational specialists, and the general public would readily dismiss claims of the effectiveness of a single physics class, or one in history or math in high school. We recognize that students need repeated, sequential exposure to a discipline in order for us to be satisfied that true proficiency (if not mastery) has occurred. Why, then, do we assume that a one-semester course in financial education in high school will impart proficiency?

Perhaps, instead, we assume that the requisite foundation has already been laid, as is the case with physics, history or math. Students are exposed to these subjects from the beginning of grade school, giving sufficient traction to the high school courses to make them effective. While it is common for school districts to have economic and financial literacy benchmarks embedded in the social studies standards, financial literacy is typically not included in states' standardized, end-of-course testing. Given the resource constraints faced by districts and classrooms nationwide, and the emphasis placed on testing, it would be understandable if these financial literacy standards did not receive adequate attention. The existence of standards is not sufficient to ensure coverage.

Extending the argument further, even if we are confident of the high school class's efficacy because we assume students have received adequate preparation in the lower grades, and even if financial literacy actually received its due in the absence of testing, I contend that it is insufficient preparation for the financial decisions students will face. The reason lies in what is commonly perceived to be the definition of financial literacy.

Although the National JumpStartCoalition's financial literacy standards are multi-faceted and focus on critical thinking skills, financial literacy is often popularized as the ability to perform rudimentary tasks, such as balancing a checkbook. The problem with defining financial literacy in these terms is that it trivializes and de-contextualizes the true nature of the subject. Knowing what financial literacy terms mean reduces the subject to a vocabulary exercise, one without the context within which to apply the terms. In short, financial literacy, as it is commonly understood, is a rather vapid subject, easily mastered by memorizing a few terms and some "do's and don'ts".

With the above as the understanding of what financial literacy is, it is no surprise that public policy officials put so much faith in a one-semester high school course. Without adequate preparation, however, this course is not as effective as it otherwise might be. Perhaps expanding our notion of what financial literacy is—less about terminology and mechanical processes and more about teaching students critical thinking skills—and starting in the early grades would provide significant benefits to students when they get to a stand-alone class. In this framework, financial education is really about making good decisions of all kinds, but specifically, decision-making within the context of spending, saving, budgeting, etc. Financial education should encompass decision-making strategies, teaching students how to recognize opportunity costs—generally, to systematically develop an overarching, context-free methodology for dealing with life.

Expanding the notion of what financial education is does several things. First, it allows discussions about its place in the curriculum to move beyond a rudimentary skills-based focus to one that recognizes that the same sequential, concrete-to-abstract approach that is embedded in the curriculum development of other disciplines is equally applicable to financial education.

Second, if financial education is best thought of in sequential terms, then it follows that it should begin much earlier than high school. Indeed, financial literacy should mirror reading literacy in terms of moving from the concrete to the abstract, from the building blocks to fluency. Again, the focus of this article on K-8 financial education does not detract from the importance of high school classes devoted to the subject. Rather, the intent is to suggest that the efficacy of the high school class, and therefore, the efficacy of the resources devoted to its development and delivery, might be improved if a more structured foundation for the material were laid in the primary and middle school grades.

Third, it allows financial literacy to be more fully integrated into other disciplines. If we insist on framing financial education as a set of rudimentary skills, then cross-disciplinary approaches seem limited. However, if we broaden our understanding and expectations with respect to financial education to include a broader range of critical thinking skills, then the opportunities for multi-disciplinary strategies increase. Language arts, reading, other social studies, and math all represent fertile ground for bringing financial education's critical thinking methodology into their own contexts.

Finally, by incorporating financial education's critical thinking approach into other disciplines, we model life. Decision-making strategies are not just needed when money changes hands. Sound decision-making approaches are needed in all areas of life. They can be seen in characters' conflicts in children's literature, and are to be found in the stories of our history, for example. Identifying the common threads of critical

thinking and decision-making throughout the curriculum models for students how to incorporate these most fundamental of financial literacy tenets into all aspects of their lives, not just when they go shopping.

With this expanded framework in mind, I developed Smart Tennessee, a financial education program for students in grades K-8. I did not develop the curriculum—the program uses a widely recognized curriculum published by the Council on Economic Education, Financial Fitness for Life. This particular curriculum was chosen because of its emphasis on integration with other disciplines and its focus on decision-making. What makes the Smart Tennessee program unique is how it was established and how it has evolved, discussed in the following sections.

## **Background**

As the Director of the Center for Economic Education at the University of Memphis, I had been conducting financial literacy workshops for teachers in West Tennessee for several years. The teachers' enthusiasm about the subject matter made it clear that providing the same sort of professional development on a statewide basis would be a clear benefit to our state's students and would complement our recently-enacted (at that time) requirement of a personal finance course in high school. The Financial Fitness for Life curriculum is divided into grade bands (K-2, 3-5, 6-8 and 9-12), so the Smart Tennessee program was designed to provide exposure to financial education at three points prior to the mandatory high school class, providing some degree of foundational knowledge.

## **Funding**

To run the program on a pilot basis and to garner the broadest support possible, I sought funding using a public/private partnership. The first component, the public funds, would come from the state legislature. I used several strategies to get the support I needed. First, I got critical buy-in from the Memphis City School system, the largest system in the state. The superintendent agreed to adopt the program, irrespective of state action. Next, I got the support of the state legislators who represent Shelby County, a significant voting bloc in the legislature. Third, I solicited letters of support from business and community leaders, including the CEO of the Memphis Chamber of Commerce, the Executive Director of the NAACP, and corporate executives. And then I went to Nashville. A school board commissioner from Memphis City Schools spent the day in Nashville with me, soliciting support from the Lieutenant Governor, the Speaker of the House, and other legislative leaders. Every member of the Shelby County delegation signed a letter addressed to the Governor and other legislative leaders in support of funding for the pilot. The letters of support from the community were addressed to the same leaders.

In 2006, with the sponsorship of a House and Senate member, an amendment to the state appropriations bill was passed, providing funding for half of the cost of the Smart Tennessee program (\$125,000). To generate the other half, I approached First Tennessee Bank, the state's largest financial institution and a strong supporter of the Center. They were intrigued by the project, particularly since it represented a

public/private partnership, and agreed to provide the other half of the funding. In fact, First Tennessee agreed to a three-year commitment of \$125,000 per year.

The funding for the 2007-08 academic year followed the same process in terms of the state money. In 2008-09, the state was beginning to feel the effects of the economic downturn, and the governor let it be known that he would not support amendments to the appropriations bill. The private funding from First Tennessee remained (in its third year), but with no state money from the legislature, it appeared that the program would have to be cut back significantly. However, by this point, the program had attracted the attention of several state officials. One of them, the Commissioner of the Department of Financial Institutions, offered to provide the funds needed to continue the state's portion of the program.

The state budget was in no better shape in 2009-10, and the budget of the Department of Financial Institutions had also been trimmed. At this point, the state Treasurer became interested in the program and was able to continue the state portion of the funding. First Tennessee agreed to a fourth year of program support. It was in 2010-11 that Smart Tennessee evolved from a pilot into an established program. First Tennessee renewed its commitment to the program, maintaining the private portion of the program. The innovation occurred on the public side. The state Treasurer, with House and Senate sponsors, was successful in getting legislation passed that established the Financial Literacy Commission. The stated purpose of the Commission is to coordinate and oversee financial literacy efforts in the state, particularly in grades K-8. With the establishment of the Commission, the Smart Tennessee program became both legitimized and expanded. The Treasurer's office oversees the state's 529 college savings plan. Therefore, as part of this broader initiative, the Smart Tennessee program added some lessons on college savings and developed some materials directed at parents about college savings options.

## **The Program**

Regardless of funding sources, the Smart Tennessee program has been implemented in the same way since its inception. In the summer and early fall of each academic year, districts and schools across the state are recruited to participate. Sometimes a superintendent makes the decision to implement financial education district-wide (as with Memphis City Schools); sometimes that decision is left to each individual school within districts. Recruiting is targeted no lower than the school level—individual teachers are not recruited.

All teachertraining is conducted by one person who travels to the various locations that have agreed to participate in any given year. The training lasts 3-4 hours and is divided by grade level (a single training only covers one grade band, e.g., one training session covers K-2 or 3-5). The actual content of the curriculum is very easy to impart to teachers; Financial Fitness for Life is written in an accessible way. In addition, since it is written for elementary and middle school students, teachers can easily understand the content. Therefore, only a portion of the training time is devoted to explicitly covering the curriculum. Approximately half of the training time is spent making teachers comfortable with the idea of teaching financial literacy. Financial education can cause a significant amount of discomfort and outright reluctance on the

part of teachers that may not exist with subjects like language arts or math. The reason, we have discovered, is that many teachers in the training sessions have their own financial issues. Many are struggling with debt, with some even receiving calls from collection agencies. Even those who are not experiencing serious problems are still reluctant to approach the subject, feeling that they are not qualified since they are “just getting by.” Our experiences reflect more rigorous analyses of teacher attitudes and capacity vis-à-vis financial education. For example, Holden and Way (2009) report that teachers may form their opinions about financial education more on the basis of their own personal financial situation than on any formal training on the subject they have received. Others are part of a culture that believes that it is inappropriate to talk about money even within one’s own family, and certainly not in a public setting such as the classroom. We have discovered that training teachers to teach the curriculum is a simple matter. Teaching them that financial education is something that should be taught, and that they are the ones to do so, has been the bigger challenge.

To address these issues, we devote a large section of the training workshops to making teachers feel comfortable with the topics covered. We do that, in part, by showing a documentary film that we produced, spotlighting three individuals who made financial mistakes. The subjects in the film are ordinary people, easy to relate to, with everyday stories. This opens the lines of communication with teachers, helping to put them at ease, assuring them that it is easy to make mistakes, and more importantly, convincing them that they need to help their students avoid making them. We have had very good luck with the film, creating a non-judgmental atmosphere, but also creating a sense of urgency about the importance of financial education.

The nuts and bolts of the program are as follows. We provide each teacher a classroom set of curriculum, which includes the teacher manual, 16 copies of student workbooks, and a parent book. The Financial Fitness for Life curriculum that we use has sections in the teacher manuals that offer suggestions for at-home work for students and parents to work on together. These lessons are found in the separate parent book. We also pay each participating school a stipend of \$500. Schools are free to use this in whatever way they wish. Schools receive the stipend when teachers have mailed in all the assessments. Teachers are free to implement the curriculum at whatever point they wish during the school year (most of the training occurs in the fall semester). Some teachers deliver the curriculum in pieces throughout the course of the year. Others wait until after the state standardized testing is completed in the spring and cover it during those few weeks between testing and the end of the school year. Whenever it is implemented, teachers administer a pretest before they introduce the curriculum to the class, and a posttest upon completion. Both instruments are sent to a separate, educational research unit at the University of Memphis to insure that there is no conflict of interest in the data analysis. In addition, teachers provide some data on themselves, such as highest degree earned, number of years teaching, and a couple of attitudinal variables concerning the curriculum.

## **RESULTS**

To date, approximately 85,000 K-8 students have been taught the financial literacy curriculum. Participation has been widespread across the state, with schools in 33 of 95 Tennessee counties taking part. Program results are measured in two ways. First, we look at the change in the percentage of students who answered the assessment questions correctly from pre to post. Second, we examine the change in the percentage of students who achieved a benchmark from pre to post. We use 70% correct as our benchmark, which reflects the national average of what constitutes a passing grade. The results from the four years we have completed are presented in Table 1 (in year 1, we only had elementary students). In addition, although teachers in grades K-2 were trained on the curriculum and introduced into their classrooms, these lower elementary students were not assessed due to the variability in their reading skills. Therefore, the “elementary” designation below refers to the results from upper elementary students in grades 3-5.

As seen in Table 1, there are gains in both elementary and middle students’ financial knowledge, post- over pre-test. For example, in year 2 (2007-08), elementary students, on average, scored a 46% on the pre-test; on the post-test, the average score was 68%. Middle school students got 40% correct, on average, before being taught the curriculum, and 56% correct afterwards. The most dramatic differences appear in Table 2, showing the increase in the percentage of students who answer at least 70% of the assessment questions correctly. For example, in year 3, only 8% of elementary students answered at least 70% of the assessment questions correctly before they were exposed to the curriculum. After being taught the curriculum, 46% of the students achieved the 70% benchmark. All of these differences are significant at the 0.01 level.

**Table 1. Percentage of Correct Answers, Pre to Post, Elementary and Middle**

	Elementary			Middle		
	Pre	Post	N	Pre	Post	N
	%	%		%	%	
Year 1	37	55	676	---	---	
Year 2	46	68	490	40	56	265
Year 3	45	64	552	44	59	556
Year 4	48	67	573	39	57	582

Note: All differences from pre to post are significant at the 0.01 level

**Table 2. Percentage of Students Achieving 70% Benchmark**

	Elementary	Elementary	Middle	Middle
	Pre	Post	Post	Pre
	%	%	%	%
Year 1	2	35	---	----
Year 2	12	53	5	44
Year 3	7	47	5	44
Year 4	10	43	3	39

Note: All differences from pre to post are significant at the 0.01 level.

## DISCUSSION

Three things should be noted at this point. First, all of the differences reported in the tables above are significant at the 0.01 level. Second, not all students receiving the curriculum were assessed. In schools where multiple sections of the same grade intended to teach the curriculum, one teacher's class was selected at random by program administrators to participate in the pre- and posttest administration. Selection occurred at the conclusion of the professional development program, before the curriculum was implemented. This design was implemented due to resource constraints. Theoretically, sample selection bias could be an issue, but it seems unlikely that such a systematic bias would be present given that the selected classrooms were from the same school as those that were not included in assessment. Finally, again because of resource constraints, we could not construct control and treatment groups for each of these years.

While this sort of experimental design would be ideal, its difficulty in implementation is a common problem in the social sciences. However, we do have a proxy for the control/treatment experimental design in this case. The advantage of having a control group is that a "trend" (difference between control group's post and pre scores) can be identified and subtracted from the "gross" effect of the program for the treatment group. The remaining effect represents the net contribution of the program, absent any common, external influence on level of financial knowledge. But since we have both elementary and middle school students in our analysis, we have a proxy for that trend—the difference between middle pre-score and elementary pre-score. This difference indicates the change in financial knowledge absent any financial literacy instruction over what is, on average, a 3-year time period (age difference of middle and elementary students). The assessments given to elementary and middle school students vary only in the level of the language—the same concepts are covered in each. The mean scores (presented in Table 1) are not statistically different between elementary and middle school students. Therefore, since the difference in pre-scores for the two groups are statistically the same, we can assume that the trend is non-existent, and that our results are unbiased and attributable to the program. These conclusions are reinforced by our ability to control for exogenous variables that could account for some of these gains, as explained above (curriculum, trainer, training length, etc.).

Although not reported here in detail, the data from year 3 (2008-09) were further analyzed to ascertain those factors that most affected students' financial knowledge. Controlling for factors such as school size and location (urban/rural), teacher experience, highest degree, pretest score, and other student socioeconomic factors, the most important factor (for both elementary and middle school students) in determining post-test score was a teacher attitudinal variable indicating that the teacher thought that the curriculum would be beneficial for his/her students. I mention it here to stress the importance of teacher buy-in during the training process. As described above, a significant portion of our training time is spent in soliciting this sort of buy-in. Our results suggest that this is time well-spent.

## CONCLUSIONS

There is an increasing interest in financial literacy as a result of the recent crisis. To the extent that this interest is focused on students, it has been largely confined to high school students, where a one semester course is presented as the solution. I believe this is an inadequate solution. There seems to be no compelling reason to treat financial education as unique, a subject that does not require the same foundational knowledge as any other subject a high school student would take. Further, common conceptualizations of what constitutes “financial literacy” trivialize the subject, resulting in a reductionist treatment that imparts little in the way of developing a fundamental approach to thinking about financial (and life) issues.

In Tennessee, we were successful in funding a program that focuses on K-8 education, placing it in a larger, cross-disciplinary context. The Smart Tennessee program is unique in its public/private support, in its systematic, comprehensive approach, and in its teacher training focus. Results suggest that this approach is successful in increasing the financial knowledge of K-8 students, perhaps providing more traction to our mandatory high school class. This program is easily replicated, and the Tennessee experience is presented here in the hopes that other states can also move beyond the high school course and take financial education seriously.

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