

Evaluating MoneySKILL[®]

Effects on financial knowledge,
short-run financial behaviors,
and long-run financial behaviors

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1. Executive Summary

Given that 18-year-olds frequently have to make complex financial decisions without much—if any—financial experience, teaching young people how to navigate the financial system remains important. While recent research shows that financial education across all domains improves knowledge and downstream behaviors in a cost-effective manner (Kaiser et al., 2020), understanding which specific curricula benefit which populations remains important.

MoneySKILL is an online-specific financial education curriculum designed for middle school, high school, and college students. This report evaluated the curriculum’s ability to change financial knowledge and financial behaviors. It begins with a description of the teacher-friendly curriculum and background on the program. The report then uses pre-and post- tests to determine knowledge gains. The two most novel parts of the report come from evaluating how MoneySKILL changes financial behaviors. Using observational administrative data from the Department of Education and from the AFSA Education Foundation, it documents the change in FAFSA applications once schools adopt MoneySKILL at the high school level—an outcome that represents a potential reduction in the cost of attending college. Subsequent analysis uses data on participation in MoneySKILL’s middle school content to see how additional access to the middle school curriculum affects financial behaviors while in high school.

This evaluation sheds light on the effectiveness of the MoneySKILL curriculum in changing both knowledge and behaviors. The key findings are described below.

FINANCIAL KNOWLEDGE

When comparing pre- and post-tests from 78,170 students from 2014-2020, improvements in financial knowledge are 60% on average. These improvements are similar in magnitude across all settings of instruction: middle school, high school, and college. The knowledge gains are not concentrated among a small fraction of students: over 90% of students see improvements in financial knowledge.



SHORT-RUN FINANCIAL BEHAVIORS

Using administrative data from 2,525 high schools with MoneySKILL and 13,020 high schools without MoneySKILL spanning 2015-2019, or 73,437 observations in total, I document the relationship between MoneySKILL participation and FAFSA applications. Once high schools adopted MoneySKILL—when compared to themselves prior to adoption and other high schools in the same state that never adopted—completed applications for the FAFSA increased. Adopting MoneySKILL increased FAFSA completions by 2.2 and 100 more MoneySKILL participants in the high school increased FAFSA completions by 4.6. Since millions of students who are eligible for Pell grants never apply (Kantrowitz, 2009), these applications could reduce the cost of postsecondary education, as well as long-run debt. Thus, this documented increase in FAFSA completions has the potential to improve downstream finances.

DOWNSTREAM FINANCIAL BEHAVIORS

Until very recently, MoneySKILL was one of very few financial education curricula available for middle school populations. Over this period, some states had increases in MoneySKILL participation, some states had decreases in MoneySKILL participation, and other states had no change. Using a sample of over 2,500 students, I show that teens who went to middle school in times with higher volume of state-level participation in MoneySKILL—compared to their peers within the same state who completed MoneySKILL when it was less available and to teens in other states who had no MoneySKILL access during middle school—were more likely to have a checking or savings account when they were 15 through 16 years old. The increase in banking occurs between one and four years down the road from the education.

Given that MoneySKILL is offered to all educators (including teachers, schools, and homeschooling parents) free of charge, the only costs associated with the curriculum are opportunity costs: What are teachers giving up by choosing this curriculum? Since many states and schools are adding personal finance requirements, teachers need to select curricula that are easy-to-implement, low-cost, and result in improvements in financial knowledge and behaviors. MoneySKILL fits these criteria well.



2. Introduction

In July 2020, over 27 percent of those aged 18-29 reported that they were either finding it difficult to get by or were just getting by when asked how well they were managing their finances.¹ At the same time, research has shown that financial literacy among young adults is low: less than one third can correctly answer basic questions related to risk, diversification, and inflation (Lusardi, Mitchell and Curto, 2010). One potential lever to improve the financial literacy of young adults and to improve their subsequent financial situations is early-life financial education.

While recent research shows that across all experimental studies financial education is effective (Kaiser et al., 2020), understanding how specific programs affect financial literacy and financial behaviors remains important. This study examines the effectiveness of one particular educational curriculum: MoneySKILL. This online-specific content is designed to be molded to teachers' needs, as it can easily be incorporated into a standalone personal finance course or a class that incorporates personal finance content into other courses (such as Economics, Math, Social Studies, etc.). One of the most important features of MoneySKILL is that the content is free of charge to districts, schools, and teachers of all kinds, including parents who choose to home school.

The main data for this evaluation come from MoneySKILL participation, though there are three distinct configurations of the participation data employed for the analysis. The first is a de-identified individual-level dataset containing pre- and post-test scores for all students who started the curriculum. The second is participation in MoneySKILL over time at the ZIP code-level by setting (e.g., middle school, high school, or college). The third is state-level participation counts by setting. These data are then supplemented with two publicly-available data sources: Free Application for Federal Student Aid (FAFSA) completions at the school-level from U.S. Department of Education's National Center for Education Statistics (NCES) and data from the US Census Bureau's Survey of Income and Program Participation (SIPP). The FAFSA data are combined with the ZIP code-level High School MoneySKILL participation data. The SIPP data are combined with middle school MoneySKILL participation to determine how middle school participation relates to financial behaviors in teenage years.

¹ This is from the author's own calculation of data from the Federal Reserve Board's Survey of Household Economic Decision-making (2020).



There are three clear takeaways from this evaluation.

1. First, a comparison of pre- and post- tests shows clear and sizable knowledge gains for nearly all students who participated in MoneySKILL. These knowledge gains are apparent in all settings: middle school, high school, and college.
2. Second, an analysis of high school MoneySKILL participation suggests that the curriculum changed short-run financial behaviors. I show that schools that adopt MoneySKILL have a higher number of applications for the FAFSA, when compared to schools that do not have MoneySKILL and within the same school district before the MoneySKILL curriculum was adopted. On average, adopting MoneySKILL leads to two more FAFSA completions in that year and having ten more MoneySKILL participants in a school increases FAFSA completions by 0.4.
3. Third, using data from middle school MoneySKILL participation at the state level, I show that states with increased participation also exhibited an increase in the likelihood that teens had bank accounts while in high school. This provides some of the first evidence of middle school financial education in U.S. schools on downstream financial behaviors.

Given the ways in which the COVID-19 pandemic has changed the style of learning, MoneySKILL's clearly effective curriculum may be an excellent option for teachers or parents in remote settings. Prior to the start of the pandemic, MoneySKILL was designed to be a fully online program, and the results of this evaluation suggest that its completion improves financial outcomes.



3. Background

This section first describes the MoneySKILL curriculum briefly. It then goes on to discuss the research previously completed pertaining to financial education in schools.

3.1 MoneySKILL

MoneySKILL is an online personal finance curriculum designed for either a middle school or high school and college population.² The content contains 37 modules for the high school and college population that range from financial planning, income volatility and life-cycle models, specific financial accounts, debt, savings, fraud, credit, health insurance, student loans, and a variety of other specific financial topics.³ A subset (12) of these modules are available for the middle school population.

The curriculum is highly customizable, where teachers can decide which modules are most important to their specific student body. For example, a high school class with a high fraction of students who will be applying to college may use the unit on student loans, whereas a class within a career and technical education program may focus on earned income and skill demand or owning a home, as this population may begin earning sooner. Similarly, a high school class in an inner-city where public transit is common may choose not to cover the module on vehicle financing, but a rural high school class may find that topic valuable. Since a one-size-fits-all approach does not accommodate the heterogeneous backgrounds of American students when delivering financial education, the MoneySKILL curriculum allows instructors to meet students where they are.

Another advantage of the customizable curriculum comes from the differences in what states require of high school students when it comes to personal finance. In some states, students are required to complete a standalone personal finance course prior to graduation. In other states, personal finance content must be incorporated into another required course, such as Economics, or as standards in a broader curriculum, such as Social Studies. Other states still have no requirement, but individual schools still require personal finance content to be offered or completed in some ways. MoneySKILL gives teachers an excellent curriculum that can be molded to any of these policy demands.

Though the MoneySKILL curriculum was first developed in 2002, it has been updated regularly to remain relevant to a constantly-evolving financial world. The data on MoneySKILL participation started to be extensively collected in 2014. The time frame between January 2014 and August 2020 will be the focus of the remainder of the report.

² For more on the MoneySKILL curriculum see <https://afsaef.org/MoneySKILL/About>.

³ For a full list of the modules, see <https://afsaef.org/MoneySKILL/About/Course-Content>.



3.2 PREVIOUS WORK ON THE EFFECTIVENESS OF FINANCIAL EDUCATION

While early results on the effects of financial education on financial behaviors were not optimistic on its benefits (Fernandes, Lynch and Netemeyer, 2014; Hastings, Madrian and Skimmyhorn, 2013), a recent meta-analysis of all experimental financial education research to date shows that financial education improves both financial knowledge and downstream financial behaviors in a cost-effective manner (Kaiser et al., 2020). While on average, financial education programs are effective, it remains important to study which programs are most successful in improving outcomes.⁴

Recent research estimating the causal effects of incorporating financial education into required high school coursework on financial behaviors has shown that this policy lever has promise. Specifically, requiring all high school graduates to complete some amount of financial literacy education increases credit scores and decreases default rates (Urban et al., 2018; Brown et al., 2016), lowers non-student debt (Brown et al., 2016), shifts student loan borrowers from higher to lower interest financing (Stoddard and Urban, 2019), improves student loan repayment (Mangrum, 2019), reduces payday lending (Harvey, 2019), and increases savings for some low-income households (Harvey, 2020).⁵

While there is a vast literature showing that financial education improves financial knowledge in U.S. schools (Walstad, Rebeck and MacDonald, 2010; Batty, Collins and Odders-White, 2015; Harter and Harter, 2009; Go et al., 2012; Hinojosa et al., 2009), studying the effects on financial behaviors, particularly for young people is trickier. As in the state mandate literature discussed above, measuring outcomes for those 18 and older is relatively straightforward. Outcomes among minors tend to be harder to construct. Some studies have overcome these issues. For example, Batty et al. (2020) come up with outcomes based on their My Classroom Economy Experiment for elementary school students.⁶ This paper will contribute to this literature by showing the effects of a middle school curriculum on a financial outcome—account ownership—before age 18. Work in international contexts has also clearly documented that financial education improves financial behaviors. For example, two large-scale national experiments in financial education showed improvements in financial knowledge and behaviors in Brazil and Peru (Bruhn et al., 2016; Frisancho, 2018). Others have used smaller-scale experiments to show positive outcomes in Germany (Lührmann, Serra-Garcia and Winter, 2018, 2015), the Netherlands (Kalwij et al., 2019), and Spain (Bover, Hospido and Villanueva, 2018).

⁴ A Consumer Financial Protection Bureau review of the literature on the causal effects of financial education for youth also contains a detailed description of the academic literature on financial education in schools: https://files.consumerfinance.gov/f/documents/cfpb_youth-financial-education_lit-review.pdf.

⁵ There is an earlier literature that studies the effects of “personal finance mandates” in the 1950s-1980s did not affect outcomes. These policies were very low-touch, nearly always having very basic requirements, such as mentioning interest rates during any class.

⁶ One excellent resource for developing measures on the financial capability of younger populations is the US Consumer Financial Protection Bureau’s Building Blocks Measurement Guide. It can be found here: <https://www.consumerfinance.gov/about-us/blog/measuring-childs-progress-building-blocks-financial-capability/>.



4. MoneySKILL Curriculum and Financial Knowledge

In this section, I use pre- and post-tests to show that the MoneySKILL curriculum is associated with an increase in financial knowledge. First, I explain the data used, and second, I report the results.

4.1 MoneySKILL Data

I begin with three datasets provided directly from MoneySKILL. First, I use a dataset of de-identified individual-level test scores to complete a pre-post analysis. Importantly, these data contain pre-test and post-test scores for all students who initiated the curriculum. To protect the identity of students, all data has been scrubbed of identifying information. The student-level data include: a unique but randomly-generated id, the grade level (middle school, high school, middle school students who took a subset of the high school curricula, and college), the month and year the exam was completed, a pre-test score, a post-test score, the modules completed, and the scores for each of the modules' exams.

While MoneySKILL was first developed in 2002, comprehensive data were collected beginning in 2014. The final sample includes 78,170 students from 2014-2020. Though 99% of the sample span all 50 U.S. states and the District of Columbia, the final 295 observation span an additional five countries (Brazil, Germany, India, Japan, and the Philippines). The final sample for analysis purposes includes only the students who took the pre-test and also completed the post-test. Figure 1 depicts the ZIP codes within the US where there has been high school (top panel) and middle school (bottom panel) participation in MoneySKILL from 2014-2020. Participation is geographically broad and not concentrated in just some regions of the country.

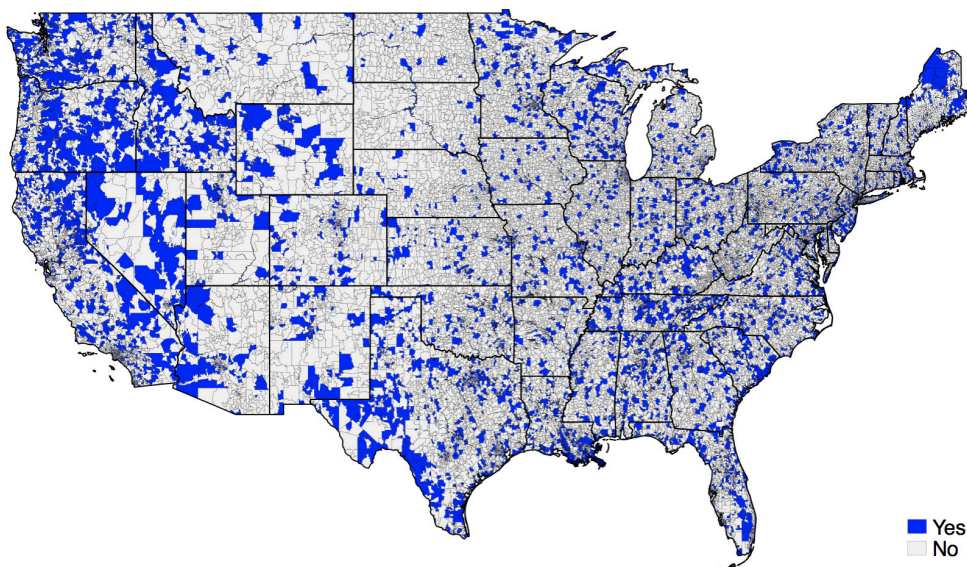
On average, middle school students complete 11 modules, high school students complete 27 modules, and college students complete 32 modules.⁷ The modules completed vary, which suggests that indeed teachers are customizing the curriculum.

⁷ Recall that there are 37 modules in total for high school and college students.

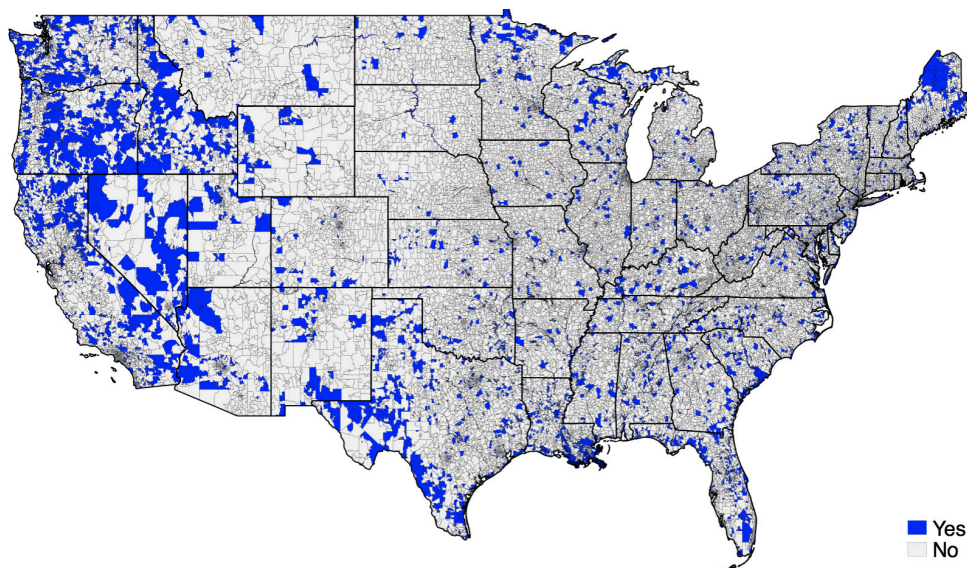


FIGURE 1: MAPS OF MONEYSKILL PRESENCE 2014-2020

High School



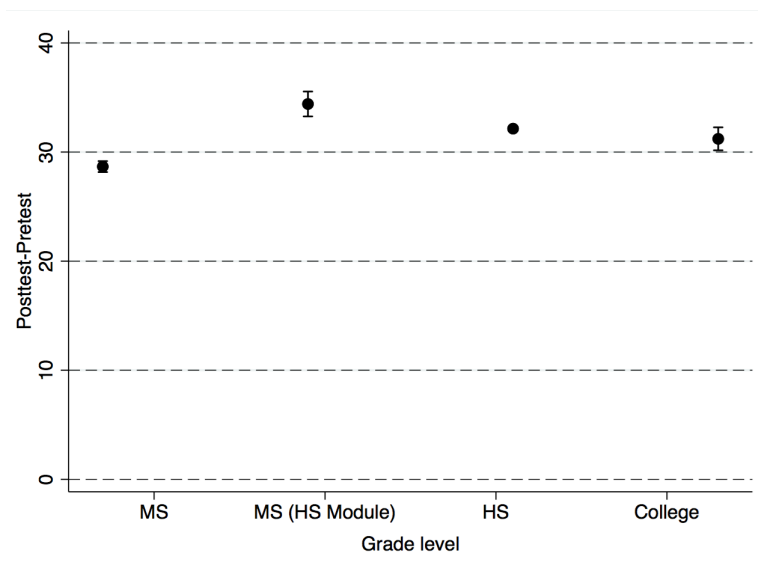
Middle School



Notes: Maps include the ZIP codes where at least one person started the MoneySKILL curriculum by taking a pre-test from 2014-2020. Data come from the AFSA Education Foundation.



FIGURE 2: MONEYSKILL ASSOCIATED WITH IMPROVEMENTS IN FINANCIAL KNOWLEDGE



Notes: Each estimate in this figure is the difference between pre- and post-tests within individual with 95% confidence intervals depicted. The exams are graded from 0 to 100. The mean pre-test scores are as follows: middle school = 55, middle school with high school modules = 50, high school = 52, and college = 54. Sample sizes are 11,194 (middle school); 3,005 (middle school with high school modules); 62,332 (high school); 1,639 (college).

4.2 Findings

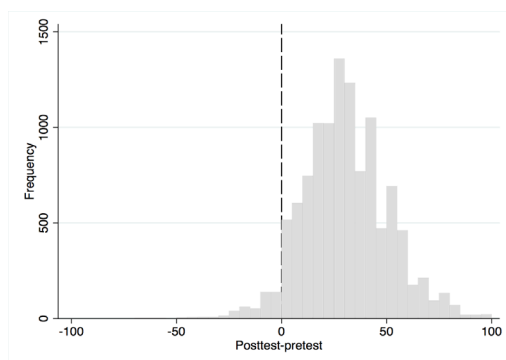
Using pre- and post-tests, Figure 2 shows that in all settings, the MoneySKILL curriculum is associated with an improvement in test scores. These gains are all precisely estimated with tight 95% confidence intervals. Since scores are reported on a 100-point scale and pre-test average scores range from 50-55 depending on the setting, these improvements are quite large. This suggests that students know relatively little about financial literacy prior to starting the course and come out of the course with a greater understanding of personal finance. These improvements are a bit larger than those found in Walstad, Rebeck and MacDonald (2010), where they evaluate the Financing Your Future curriculum.

In addition to large gains on average, Figure 3 plots the histogram of knowledge gains across students to verify that the average improvement does not simply come from extremely large improvements from a small group of students. Indeed, that is not the case. Figure 3 shows that nearly all students gain knowledge due to the MoneySKILL curriculum, where most students experience sizable gains. Over 90% of students see improvements in financial literacy scores from the pre- to post-tests.

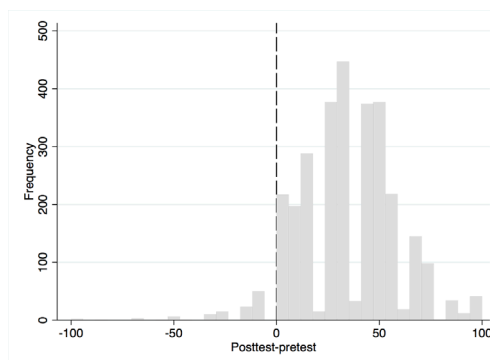


FIGURE 3: MONEYSKILL IMPROVES FINANCIAL KNOWLEDGE FOR NEARLY ALL STUDENTS

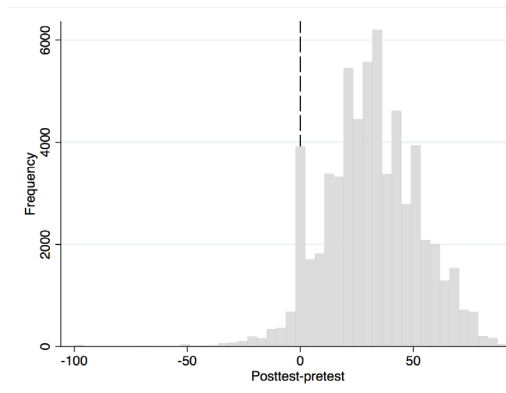
Middle School



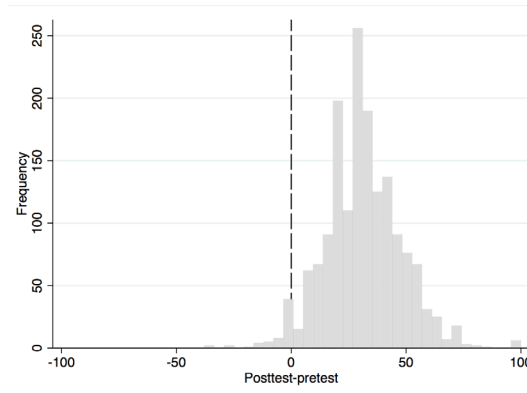
Middle School (HS Modules)



High School



College



Notes: The histograms depict the gains in financial knowledge at the student-level (post-test minus pre-test). The exams are graded from 0 to 100. The mean pre-test scores are as follows: middle school = 55, middle school with high school modules = 50, high school = 52, and college = 54.



5. MoneySKILL and Short-run Financial Behavior

This section uses data on MoneySKILL participation in high school paired with data on FAFSA filings from the U.S. Department of Education. It then compares school districts to themselves before and after MoneySKILL is adopted, as well as across school districts that did and did not ever adopt MoneySKILL curricula to see how the education changes FAFSA completions.

5.1 FAFSA Data

To determine the causal effects of MoneySKILL on short-run financial behaviors, I merge the ZIP-code level MoneySKILL participation data to FAFSA completions. I do this by downloading the database of high schools in the U.S. Department of Education's NCES data and matching ZIP codes to schools. Those ZIP codes that do not match to any high schools are assumed to have no MoneySKILL participants in that year. ZIP codes that match to multiple schools are all assigned the MoneySKILL participants for that ZIP code, which would attenuate any effects. I then downloaded the FAFSA data directly from NCES and constructed a measure of cumulative FAFSA applications from January through the end of May of the given academic year for each school.⁸ I performed a fuzzy match of school names from the FAFSA data to the NCES data. There were 72,880 observations that were perfect matches and an additional 1,478 observations that had 99% matches. Only 4,616 school-by-year observations were not matched (6%). I use the NCES indicator for a school district (LEAID) in order to make within-school district comparisons throughout the analysis. The final sample includes 2,525 "treatment" high schools that adopted MoneySKILL at some point and 13,020 "control" high schools that never had MoneySKILL from 2015-2019; across all years, this amounts to 73,437 observations in total.

In order to do some analysis of the heterogeneity of effects, I use data on financial education courses across schools. These data record whether or not each school has a standalone personal finance course, a course that embeds personal finance content into another subject, or has no personal finance content included in any of its course offerings.⁹

⁸The data can be obtained here:

<https://studentaid.gov/data-center/student/application-volume/fafsa-completion-data>.

⁹These data can be downloaded from <https://www.carlyurban.com/home/financial-education>.



5.2 Findings

In this analysis, I alternatively include state and year fixed effects (Columns (1) and (3) of Table 1) to account for differences across states in policies and differences over time in national trends in FAFSA filings and financial literacy and a more restrictive model with state-by-year fixed effects (Columns (2) and (4) of Table 1) to account for within-state changes in educational policies over time. Both models also include school district-specific fixed effects, and both models result in extremely similar results. The specific model is in Equation 1. F_{hdsy} is the number of FAFSA applications completed in high school h within district d in state s and year y ; MS_{hdsy} is alternatively the existence of MoneySKILL or the number of MoneySKILL participants measured by pre-tests in high school h within district d in state s and year y ; β_s are state fixed effects and γ_y are year fixed effects, and this combination is alternated with δ_{sy} —state-by-year fixed effects; η_d are school-district fixed effects;¹⁰ ϵ_{hdsy} is the error term.

$$F_{hdsy} = \alpha_0 + \alpha_1 MS_{hdsy} + \beta_s + \gamma_y + (\delta_{sy}) + \eta_d + \epsilon_{hdsy}$$

Table 1 shows that having MoneySKILL increases FAFSA completions by 2.2 on average, which is a modest but plausible 0.8 percent increase. When exploring the intensive margin, our results are relatively similar: one more MoneySKILL participant increases FAFSA completions by 0.046. Stated another way, if 100 more students begin the MoneySKILL curriculum, one could expect 4.6 more FAFSA completions. This means that expanding the MoneySKILL curriculum may have the benefit of increasing applications for federal student aid, which could then help students to more effectively finance their college educations. This finding is consistent with Stoddard and Urban (2019), who find that state-required financial education increases FAFSA applications and shifts students from high cost methods of paying for college—such as private student loans and credit card debt—to low cost methods—such as Stafford loans and grants and scholarships.

I then document these overall effects by the type of financial education course in the high school in Figure 4. These data are based on 2018-2020 course policies and may not accurately depict the entire period, but they are suggestive of the type of financial education policy in the given school. I split this into two groups: standalone courses in personal finance and courses where personal finance is embedded into another subject. I also plot the overall effect from Table 1 Columns (2) and (4).

¹⁰ I choose school-district fixed effects instead of school fixed effects since in the occasion that there are multiple schools within the same ZIP code, I assign the MoneySKILL variables to all of those schools. For this reason, standard errors are clustered at the school district level.



TABLE 1: HIGH SCHOOL MONEYSKILL PARTICIPATION INCREASES FAFSA COMPLETIONS

	(1)	(2)	(3)	(4)
	Number of FAFSA Applications Completed			
Has MoneySKILL	2.199*	2.227		
	(1.275)	(1.266)		
MoneySKILL Participants			0.0464***	0.0470***
			(0.0153)	(0.0151)
Observations	73,328	73,328	73,328	73,328
Includes State Fixed Effects	YES	NO	YES	NO
Includes Year Fixed Effects	YES	NO	YES	NO
Includes State-by-Year Fixed Effects	NO	YES	NO	YES
Includes School District Fixed Effects	YES	YES	YES	YES

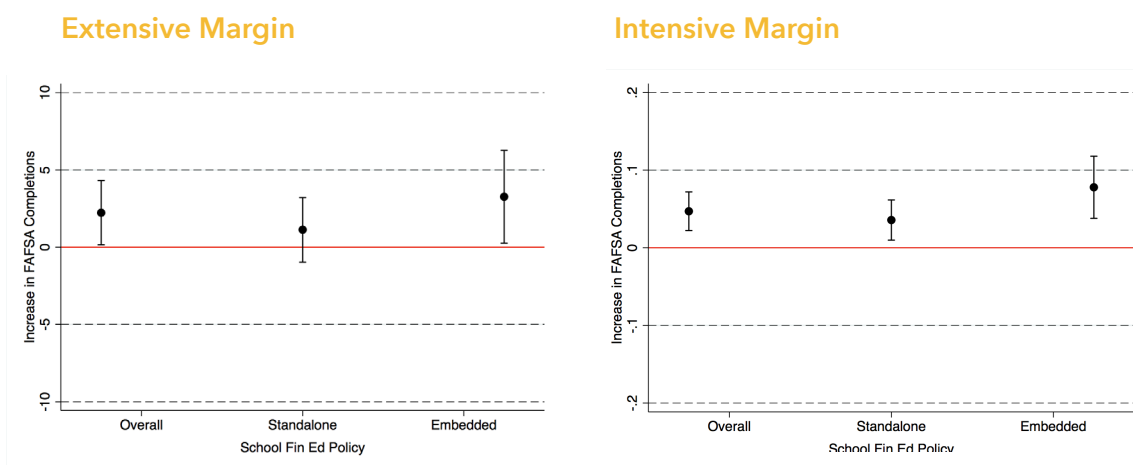
Notes: Robust standard errors clustered at the school-level in parentheses. * $p < 0:10$, ** $p < 0:05$, *** $p < 0:01$. Columns (1) and (3) include school district fixed effects, year fixed effects, and control for enrollment at the school-by-year level. Columns (2) and (4) include school district fixed effects, state-by-year fixed effects, and control for enrollment at the school-by-year level. Pre-tests are the number of MoneySKILL pre-tests completed in that year. Has MS = 1 if the school had any MoneySKILL participants that year and zero otherwise. Enrollment is the number of students enrolled in the high school that year from NCES. FAFSA is the number of FAFSA applications completed from the given school for the given year. FAFSA data are from 2015-2019 and come from NCES. MoneySKILL participation data comes from the AFSA Education Foundation. Mean FAFSA completions are 110.5. Mean MoneySKILL participation is 2.35 unconditional on enrollment and 36.2 conditional on enrollment.

Figure 4 shows that in schools where a standalone course is either required or offered, adding MoneySKILL does not have much of a change in FAFSA filings. This is likely because the schools had some type of financial education before MoneySKILL entered the school and it is no more or less effective, on average. However, the right panel shows that adding more MoneySKILL participants does increase FAFSA filings in schools with standalone courses. This suggests that expanding financial education with the MoneySKILL curriculum increases FAFSA completions.

The effects are even larger in schools where personal finance is embedded into another course, both on the intensive and extensive margin. This finding suggests that MoneySKILL may be an excellent resource for teachers incorporating personal finance into other subjects. Specifically, it improves a short-run financial outcome that may have long-run benefits. This could be because of MoneySKILL's flexible curriculum that allows a teacher to adopt only a subset of modules that seem most relevant for their student body.



FIGURE 4: HAVING MONEYSKILL CURRICULUM INCREASES FAFSA COMPLETIONS ACROSS FINANCIAL EDUCATION SCHOOL POLICIES



Notes: The only difference between the top and bottom panel in this figure is that the bottom figure reports the effect of one more participant in MoneySKILL at the school-level, and the top panel reports the effect of any MoneySKILL participation at the school level. Overall includes the effect for all schools (Column (2) in Table 1 for the top panel and Column (4) in Table 1 for the bottom panel). Standalone means that the estimate of having MoneySKILL on FAFSA application is reported for schools with a standalone course in personal finance. Embedded means that the estimate is only for schools that embed personal finance content into another subject. The data reflecting which high schools have standalone versus embedded courses can be found at <https://www.carlyurban.com/home/financial-education>.



To pair the SIPP data with potential MoneySKILL participation, I construct middle school participation at the state level and merge it to the SIPP data. I determine the total MoneySKILL participation in each individual's state at the time they would have been in middle school to measure access to the curriculum. I choose this age and sample because there is a lot of policy change, including expansion of financial education in high school from 2014-2020 (e.g., the period where we have MoneySKILL data). However, there are substantially fewer state-level policies at the middle-school level and far fewer financial education curricula for middle school students, making MoneySKILL one of few players in the market. This way, it is easier to isolate the correlation between the expansion and contraction of MoneySKILL within and across states over time and financial outcomes. Instead of measuring immediate financial outcomes, I consider outcomes from 15 to 16 years of age, after the individuals have exited middle school. I focus on two outcomes in particular: account ownership (having a savings or checking account) and total savings.

The map in Figure 5 depicts whether or not there was an increase, decrease, or no change in MoneySKILL participation by state from 2014 through 2018.

6.2 Findings

I estimate Equation 2. A_{isy} equals one if the individual has a checking or savings account and zero otherwise (and alternatively the amount in checking or savings accounts). MS_{sy} is the number of statewide middle school MoneySKILL participants at the time the individual was in middle school in hundreds; α_1 is the coefficient of interest. X_{iy} are individual-level characteristics, including an indicator for whether or not the individual is a female and dummies for whether or not the individual identifies as white, Black, Asian, or another race. I further include state fixed effects (β_s) and year fixed effects (γ_y). The error term is ε_{isy} , and I cluster standard errors at the state level. For the account ownership variable, I estimate a linear probability model, though the marginal effects from a probit are similar to these effects. For the savings amount variable, I include zeros and estimate a least squares specification, though the results are similar if I instead use a tobit specification.

$$A_{isy} = \alpha_0 + \alpha_1 MS_{sy} + \alpha_2 X_{iy} + \beta_s + \gamma_y + \varepsilon_{isy}$$

I report the findings in Table 2. An increase in 100 students participating in MoneySKILL at the state-level increases account ownership by 0.6 percentage points, or 2.7 percent. While the effect on total savings is positive, it is not statistically different from zero at the 90 percent level. This makes sense because it is unlikely that 15-16 year-olds on average generate enough savings to have large differences in their account balances. However, it is important that the education does increase account ownership, as this is a signal of a responsible financial behavior in the subsequent years. The benefits extend beyond simply knowledge gains.

These findings provide some of the first evidence that middle school financial education can change financial behaviors in years down the road. While other research has shown that middle school financial education improves knowledge, the effects on financial behaviors are extremely limited.¹²

¹². One exception is Batty, Collins and Odders-White (2015), though they study elementary school students.



7. Conclusions

This evaluation shows that the MoneySKILL curriculum improves financial knowledge, short-run financial behaviors, and long-run financial behaviors. Specifically, knowledge gains exist in all educational domains where MoneySKILL exists: middle school, high school, and college. While knowledge gains are important, financial education is most successful when it changes financial behaviors. This study provides evidence of changes in financial behaviors for both the middle school and high school curricula.

Incorporating MoneySKILL in high school increases the number of FAFSA applications students complete. Since many students think they are not eligible for federal aid when they are (McKinney and Novak, 2015) and millions of students who would have qualified for federal Pell Grants never applied (Kantrowitz, 2009), the curriculum seems to be filling information gaps for these students. While an increase in FAFSA applications is a short-run behavior, it could easily have long-run consequences. For example, Mangrum (2019) shows that financial education requirements increase student loan repayment nearly a decade later. To the extent that improved postsecondary financing decisions subsequently improve young adults' finances, these effects can persist for years to come and set young adults up for stronger financial futures.

TABLE 2: MIDDLE SCHOOL MONEYSKILL PARTICIPATION INCREASES ACCOUNT OWNERSHIP

	(1) Has Account	(2) Total Savings
MoneySKILL Participants (in Hundreds)	0.00642*** (0.00138)	6.615 (5.200)
<i>N</i>	2,949	2,669

Notes: Robust standard errors clustered at the state-level in parentheses. * $p < 0:10$, ** $p < 0:05$, *** $p < 0:01$. All columns include state fixed effects, year fixed effects, and control for gender and race/ethnicity of the respondent. The sample is restricted to those 15- and 16- year-olds. Participation is the total number of Middle School MoneySKILL pre-tests completed over the four years the individual was in middle school divided by 100 at the state level. Has Account equals one if the individual has a checking or savings account and zero otherwise. Total Savings is the total amount in the individual's savings account as of the last day of the year, reported in levels. Individual-level data come from the 2014 and 2018 SIPP. MoneySKILL participation data comes from the AFSA Education Foundation. Mean account ownership is 22 percent among this sample.



Expanding access to MoneySKILL in middle school increases the likelihood that 15 through 16 year-olds have a savings or checking account. This relationship exists years after the curriculum would have been completed. While the effects on the amount saved are small, the emphasis on account ownership prior to turning 18 suggests a pattern of positive financial behaviors.

Given its intentional design to be fully online, its now-demonstrated effectiveness, and the fact that it is offered free of charge, educators should strongly consider MoneySKILL when preparing a class that includes personal finance content.



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The AFSA Education Foundation was founded as a nonprofit in 1990 with the mission to educate consumers of all ages on personal finance concepts and responsible money management. For more than 30 years, the foundation has been dedicated to providing free personal finance education, resources, and training to educators of all types from schools to the workplace.

In support of its mission, the foundation developed MoneySKILL® in 2002 as one of the first online personal finance curriculums. MoneySKILL is designed to allow instructors to create custom, web-based personal finance courses primarily for middle school, high school, and college students and consists of 37 different topic areas focusing on a broad range of money management fundamentals. In addition to being completely free with no commercial advertisements for all educators, MoneySKILL is offered in English and Spanish, contains audio dictation options, and aligns with nationally recognized personal finance standards.

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