JUMP$TART! FINANCIAL SMARTS FOR STUDENTS

Game Changer

The Evaluation of the Jump$tart Financial Foundations for Educators Professional Development Program

Two Year Impact Study

Prepared by:

The Financial Literacy Group
Knowledge is Power

Research Report
April 2021

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Washington, DC

We at The Financial Literacy Group are pleased to present ***Game Changer: The Evaluation of the Jump$tart Financial Foundations for Educators (J$FFE) Professional Development Program.*** In this two year impact study, our team examined what happens to high school students when their teachers receive professional development that instructs those teachers on personal finance content as household consumers and, defying conventional wisdom, foregoes the pedagogical, classroom focus of most other teacher trainings. The J$FFE wisely puts the horse before the cart, based on the theory that if educators are teaching personal finance as a life skill, they should first learn and apply it as a life skill themselves.

Our team of researchers tested that theory as we followed teachers across two school years, and through over 1,000 student tests, two teacher surveys, a focus group and individual interviews. What we discovered was compelling. After exposure to the J$FFE program, teachers had a substantially greater impact on their students' financial knowledge than before. Educators also reported significant positive changes in their financial behavior at home due to the J$FFE professional development program. In our twelve plus years as a firm, we have seen few interventions with this type of positive impact on students and those who teach them.

We invite you to explore this research report and see if you come to the same conclusion as we have: that personal finance can be better taught if it is indeed personal to the educator teaching it.

We would like to acknowledge the leaders of the Jump$tart Coalition for Personal Financial Literacy for the courage to ask tough questions about their own program and the patience to wait for the answers...and for the boldness to commit to publishing this research upfront - win, lose or draw. In particular we want to recognize Chairman of the Jump$tart Board, Michael Staten, PhD, CEO Laura Levine and Senior Director of Education Dan Hebert. Further, we thank Fidelity, the National Endowment for Financial Education and Wells Fargo for generously sponsoring this study and commend them for their vision and their willingness to send us deep "into the weeds" to answer key questions that had long gone unasked.

Dan Iannicola, Jr.
Chief Executive Officer
The Financial Literacy Group

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Executive Summary

Game Changer: The Evaluation of the Jump$tart Financial Foundations for Educators Professional Development Program - Two Year Impact Study

In this study we discovered that educating high school teachers on the basics of consumer finance as it relates to their own lives makes those teachers significantly more effective in enhancing the financial literacy of their students. This finding sheds light on a question that has long plagued the financial literacy field, "What kind of teacher professional development actually gets results with students?" In this study generously supported by Fidelity, the National Endowment for Financial Education, and the Wells Fargo Foundation, ten teachers from the metropolitan Washington, DC area attended the Jump$tart Financial Foundations for Educators ("J$FFE") professional development program in 2019. Through over one thousand prior and subsequent data collections, the students of those teachers were found to have improved in financial literacy appreciably more than the students who were taught by the same teachers *before* those teachers completed the J$FFE program. Given the magnitude of the increase in student knowledge, it is hard to overstate the significance of this finding to the future of J$FFE and the financial literacy field writ large.

> After receiving the J$FFE training...teachers increased their student impact **threefold.**

The J$FFE downstream impact on students was substantial. High school students of teachers without the benefit of the Jump$tart professional development registered an 8% average personal finance knowledge gain from their class. After receiving the J$FFE training, however, those same teachers increased their student impact threefold. On average, student knowledge scores increased by a remarkable 24% between the beginning and end of the semester immediately following their teachers' participation in the J$FFE program. The training appeared to greatly amplify the course's positive effect on student knowledge.

This effect was even more pronounced on certain subgroups of students, particularly those from communities that have been historically financially underserved. For instance, African American students saw their lift in financial knowledge increase by over four times, from 5% to 21%, when taught by a teacher who received the Jump$tart professional development. Moreover, this five fold rate of improvement was significantly higher than their white counterparts who saw their knowledge gains rise from 13% to 29%. Hispanic students also saw a strong lift in knowledge rising from a 14% increase in the semester before the teachers participated in the J$FFFE to an improvement of 25% in the semester after. Likewise, students from households in which the parents' or guardians' highest level of educational attainment was a high school diploma, experienced knowledge gains almost three times better than their peers living in a household with a college-educated parent or guardian. Similarly, unbanked students improved their scores more than their banked peers by a knowledge-increase ratio of 4.7 to 1.

Predictably, but worth noting, the training appeared to have a strong impact leveling the playing field for teachers with less experience. The students of teachers with less than ten years' experience improved their scores more than students of teachers with ten or more years of experience by a factor of nine. This suggests that the J$FFE program can help teachers who are earlier in their careers close the gap with their more experienced peers.

The bottom line? The J$FFE professional development program proved itself to be highly impactful on the precise audiences and in the precise ways its designers intended nearly ten years earlier. But *why* was it so effective? A focus group held with participating teachers at the conclusion of the study took us beyond the data to discover an answer to that critical question.

Most teachers in the study were quick to contrast the J$FFE professional development with other more traditional financial education trainings they had taken that emphasized pedagogy, using specific curricula and student-centered activities. When speaking of traditional trainings, one teacher explained, "They taught a lot of information under the assumption that I, as a teacher, already knew the material in depth and they were teaching us how to teach the material but not 'what does it encompass?'" She went on, "In other words, there was no background knowledge. They assumed you came in with all of that background knowledge." A number of teachers shared similar experiences.

When the focus group turned to the specifics of the J$FFE program, however, most of the teachers stressed the importance of the fact that the Jump$tart professional development was teacher-focused and content-driven. One of the participants summed up the sentiment of the group when he stated that the J$FFE training "was especially helpful in not just furthering my knowledge, but it allowed me to bring a new level of confidence into the classroom and start to have conversations with students and generally with other people."

Nine months after the focus group, a series of follow-on, semi-structured individual interviews were conducted with some of the same teachers to determine the long term impact of the training. Teachers said that, for them, the professional development had staying power. Teachers revealed that in the time since the training they were inspired to take a number of positive financial steps in their own lives, including paying off credit cards, raising credit scores, maxing out retirement contributions, setting up a summer fund and filling gaps in their insurance coverage. In the classroom, teachers reported developing a more practical approach to presenting financial literacy lessons and adding important topics to their courses like budgeting and insurance.

The proven effectiveness of content-based, teacher-focused professional development like the J$FFE has important implications for the field of financial education. Today most teacher training consists of instruction in pedagogy and curriculum-specific lessons and activities for students. While some of these traditional trainings may show positive results for both students and teachers, in light of these findings, it is now reasonable to ask if those trainings would be *more* effective on improving student outcomes if they were provided *after* teachers were first instructed in the content of personal finance, as they are in the J$FFE program. Based upon what we have discovered in this study, perhaps all future financial literacy professional development should be preceded by a content-based, teacher-focused program as a universal prerequisite.

Development Model

The Jump$tart Financial Foundations for Educators Approach to Teacher Professional Development

KEY TAKEAWAY The J$FFE program differs from other professional development models because it focuses on personal finance as a life skill for teachers instead of an academic course for students.

The Jump$tart Financial Foundations for Educators ("J$FFE ") initiative was created in response to a 2009 research study conducted by the University of Wisconsin-Madison that surveyed teachers and found that relatively few of them felt prepared to teach financial literacy or use their state's financial literacy standards.[1] After two years of pilot testing at sites across the country, the J$FFE professional development program was launched in 2013 as a way for educators to learn the fundamentals of personal finance. Therefore, from its inception, the J$FFE approach has been focused on content knowledge rather than on a specific curriculum or method of instruction. Examples of content knowledge topics included in the J$FFE model today are income and careers, planning and money management, credit and debt, risk management and insurance, saving and investment, and personal financial resources. Each topic involves the provision of information and the application of that information to the teachers' personal financial experiences. The J$FFE training focuses on improving teachers' understanding and knowledge of financial concepts so that they can make positive financial changes in their own lives. The operating theory of the J$FFE program is that teachers should be better prepared to teach these financial concepts to their students having first applied them to their own financial lives.

Jump$tart Senior Director of Education Dan Hebert welcoming teachers to the professional development program.

Since 2014 over 1,100 teachers nationwide have received J$FFE professional development through 26 trainings hosted by state Jump$tart Coalitions or the National Coalition.

Gail Tulipani of Fidelity Investments presenting a session on investments.

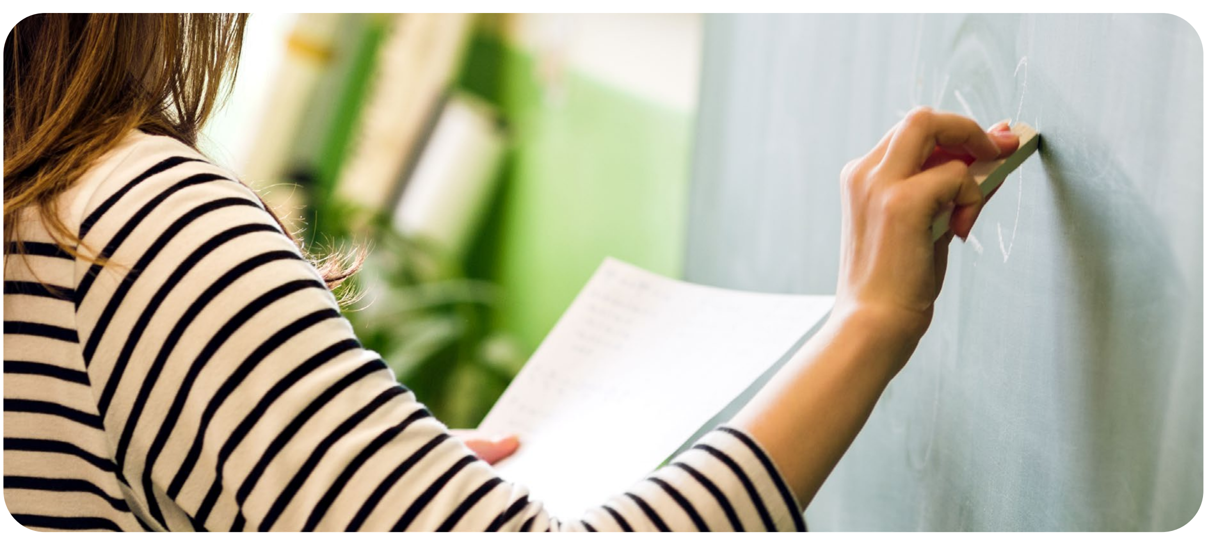
In this study we examined the effectiveness of the Jump$tart Financial Foundations for Educators training in improving student financial knowledge, attitude and behavior. The J$FFE training focuses on improving the financial literacy and confidence of teachers in managing their own financial affairs. The theory we are testing is that teachers who are more knowledgeable and confident in their own understanding of financial concepts should be more effective in teaching those concepts to students. Thus, if this theory is correct, we would expect to see higher levels of student financial knowledge and improved financial attitudes and behaviors as a result of attending personal finance courses taught by J$FFE-trained teachers than among students of these teachers before they were exposed to the training.

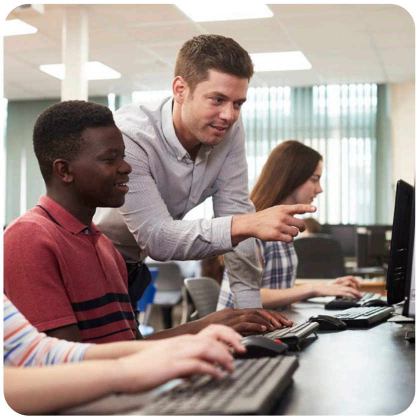
Select Literature Review

KEY TAKEAWAY Previous studies have determined the J$FFE's positive effect on teachers as well as the benefit of personal finance courses to students, but have not isolated whether or how a teacher's participation in the the J$FFE program actually impacts students.

Previous research has documented the effectiveness of the J$FFE approach on teachers' confidence and behavior. In a study called "Content-Based Teacher Professional Development", Hensley (2013) described the results of an initial pilot project that tested the J$FFE model. A survey of participants following their attendance at a J$FFE workshop found that there was an increase in the percentage of teachers who agreed they had the knowledge to effectively teach their students about personal finance and an increase in the percentage of teachers who said they included financial education in their classroom instruction.[2]

In the "Prepped for Success" research Hensley and Pelletier (2015) also examined the effectiveness of the teacher professional development model that forms the basis of the J$FFE. The authors found that attendance at a three-day workshop focused on personal financial literacy for teachers, resulted in: 1) positive changes in teacher personal finance behaviors, 2) increases in teacher confidence in personal finance issues, and 3) increased integration of financial education content into classroom teaching.[3]





Research has also assessed the effect of J$FFE-trained teachers on students' knowledge of personal finance.[4] The "Prepped for Success" study found that students who had taken a financial literacy class taught by a J$FFE-trained teacher were more knowledgeable about financial issues than were those who had not taken the class. Because this evaluation looked at just two groups of students—one that took the financial literacy course and one that did not—it was not possible to determine how much of the increase in students' personal finance knowledge was the result of the J$FFE-trained teachers and how much the result of the personal finance information provided in the course.[5]

The question left unanswered... is whether J$FFE-trained teachers have a **greater effect** on enhancing the financial literacy knowledge of students than teachers without that professional development.

The question left unanswered, and the one addressed by this study, is whether J$FFE-trained teachers have a greater effect on enhancing the financial literacy knowledge, attitude and behavior of students than teachers without that professional development.

Through this study, we have extended this line of research on students by comparing those who took courses from J$FFE-trained teachers with those who took courses from teachers who had not yet participated in J$FFE training. By doing so, we were able to estimate the contribution of the J$FFE-trained teachers to improving the financial knowledge, attitude and behavior of students. We also surveyed teachers about their personal finance knowledge, attitude and behavior before and after they attended J$FFE professional development.

Methodology

KEY TAKEAWAY A mix of quantitative and qualitative measures were deployed over two years to determine the J$FFE's impact on students and on the teachers themselves.

A. Research question

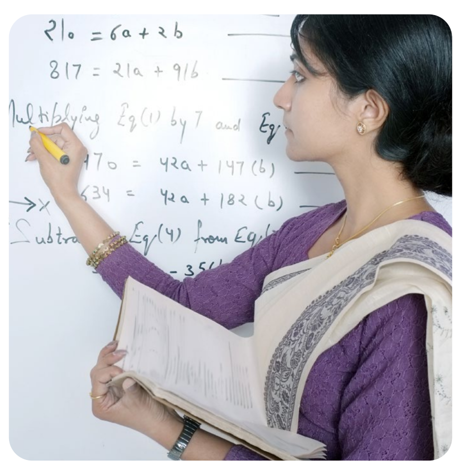
The question we addressed in this study was the following: **What is the impact of teachers who have taken the J$FFE training on student financial knowledge, attitude and behavior?** Is the contribution of J$FFE-trained teachers significantly different from that of those same teachers before they attended J$FFE training?

B. Research Design

In this study, we compared the financial literacy of two different groups of students:

- **An Untrained J$FFE Teacher Group:** students who participated in a financial literacy course during the study that was taught by a teacher who had not yet participated in the J$FFE professional development.
- **A Trained J$FFE Teacher Group:** students who participated in a financial literacy course during the study that was taught by a teacher who had recently participated in the J$FFE professional development.

This study used a simple design involving baseline and follow-up surveys of understanding of financial concepts for each of the above student groups during the Spring and Fall Semesters in 2019. Students' responses to these surveys provided the data we needed to test whether students in classes taught by J$FFE-trained teachers showed greater increases in financial literacy knowledge, attitude and behavior than students in classes taught by teachers who had not yet taken the J$FFE training. The personal finance knowledge and behavior of teachers was surveyed before and after attending the J$FFE training.



For practical reasons and in keeping with the approach of previous research in this area, we used an availability sample, with the teachers being recruited from the Washington, D.C. metropolitan area. Our sample included teachers from Maryland, Virginia, and the District of Columbia. Thus it had some of the characteristics of a larger, national survey - such as multiple jurisdictions with different educational requirements - and it included different types of schools – public and private.

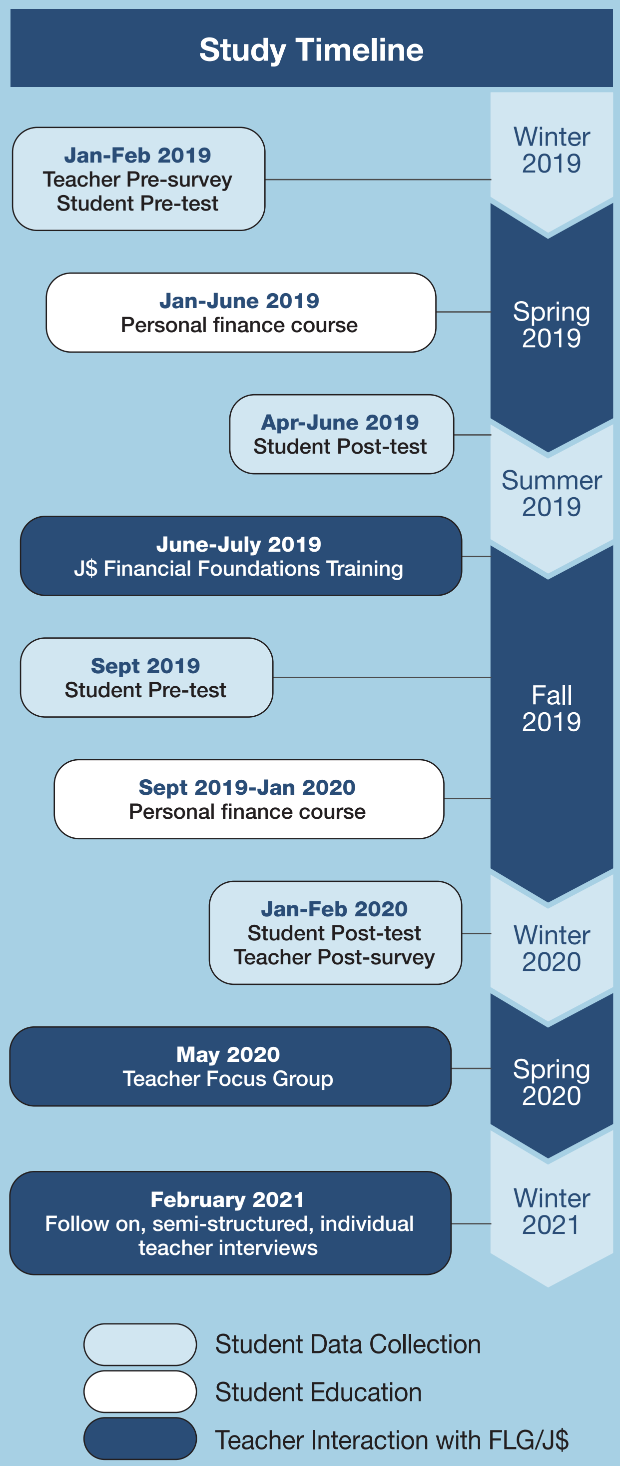
We then compared scores of those students provided instruction by J$FFE-trained teachers and those provided instruction by the same teachers before they had attended the J$FFE professional development workshop.

C. Timeline

Fall 2018: We recruited 34 teachers from Maryland, Virginia, and the District of Columbia. Invitations were extended to teachers who expressed interest in personal finance and/or whom we knew currently taught the subject in area high schools. Over time the original number of 34 teachers shrank significantly as teachers either opted out because they changed their minds on participation or they could no longer meet the obligations of the study.

Spring Semester 2019: In January 2019, 31 of the teachers selected to participate in the study completed a survey about their backgrounds and their own knowledge, attitude and behavior on financial literacy topics. Additionally we learned about how they taught personal finance in their respective classrooms.

Teachers in the study also administered an online pre-test of financial knowledge, attitude and behavior to the students in their financial literacy courses. We provided this test to them in an on-line format. This pre-test established a baseline of the students' personal financial knowledge, attitude and behavior. The teachers then taught a personal finance curriculum of their own choosing at the beginning of the semester or the beginning of the financial literacy unit (frequently January or February). The same online test was given to students at the end of the semester or end of the financial literacy unit (frequently May or June). This post-test permitted us to measure the impact of the non-J$FFE-trained teachers on improving students' financial knowledge, attitude and behavior. The student test used is presented as Appendix C.



Summer 2019: Fourteen teachers remained in the study after the first semester and participated in the Jump$tart-organized in-person professional development program at a Washington, DC hotel meeting room, June 24-26. The three-day personal finance training was in the nature of a small group seminar for the first two days and focused on topics such as enhancing earning capacity, risk management and insurance, investing, managing credit and debt and other issues. The agenda for the professional development is presented as Appendix F. The seminar's content was designed to help adult consumers and not focused on teaching students personal finance. The goal was to provide teachers with financial literacy ideas and concepts that they could use in their own lives. The final day was an open house event at the US Capitol where participants had a chance to engage in self-directed learning as they were introduced to different financial literacy leaders, experts, materials and curricula. A flyer for the US Capitol event is attached as Appendix G.

Additionally, teachers were asked to follow up with a J$FFE on-line training which covered three topics: How to be Financially Smart, Building a Strong Foundation and How to Spend Less than you Earn. The asynchronous training was initiated by the teacher, took two hours and was completed within three weeks of the live professional development.

Fall Semester 2019: In the beginning of the 2019-2020 school year, the teachers in our study gave the same financial knowledge, attitude and behavior pre-test used before to a new group of students in their financial literacy courses. They taught their financial literacy course as before, but this time with the benefit of having taken the J$FFE training. The same questions were asked on the post-test given to students at the end of the Fall Semester. Comparing the difference in the pre-tests and post-tests given to the students in the Fall Semester to the difference between the pre-tests and post-tests given in the Spring Semester permitted us to measure the impact of the J$FFE-trained teachers on improving students' financial knowledge, attitude and behavior.

At the end of the semester, in early 2020, teachers themselves were again surveyed as they were at the beginning of the study about their personal finance knowledge, attitude and behavior as well as about their confidence in teaching personal finance after having taken the J$FFE training.

May 2020: An hour-long focus group was conducted with eight of the 14 teachers that completed the study. We decided that eight was the maximum number of focus group participants to have a manageable session. Spots in the focus group were offered to all 14 participants in the study and the first to respond were made part of the group. The goal of the focus group was to add some texture to the data and to use this qualitative data to better understand the teachers' experiences with the J$FFE training. The guide used to conduct the focus group appears in Appendix D.

May 2020 Teacher Focus Group Topics:

- How the training impacted their thinking, attitudes and actions as a consumer
- How the training impacted them professionally
- General thoughts and preferences about professional development on financial literacy
- Perspectives on the best way to reach students on this topic
- Ideas on ways to improve the J$FFE training

February 2021: Semi-structured interviews were conducted of four of the study's teachers to determine the longer term effects of the professional development program roughly a year and a third after the financial literacy workshop. Specifically teachers were asked if and how the program had influenced their financial behavior at home and their teaching in the classroom. Additionally we took the opportunity to learn about their views on teaching personal finance topics virtually.

D. Data Collection

We collected our data using two surveys on personal finance knowledge, attitudes and behaviors. The first was a student survey, also referred to as a test. These surveys were administered electronically to the students at the beginning and end of each semester by their classroom teachers.

The second was a teacher survey which was administered electronically to study teachers at the beginning and end of the study, roughly one year apart. The survey provided both a baseline and a measurement of the teachers' response to the J$FFE training. The student tests measured the students' financial knowledge, attitudes, and behavior before and after receiving financial literacy instruction.

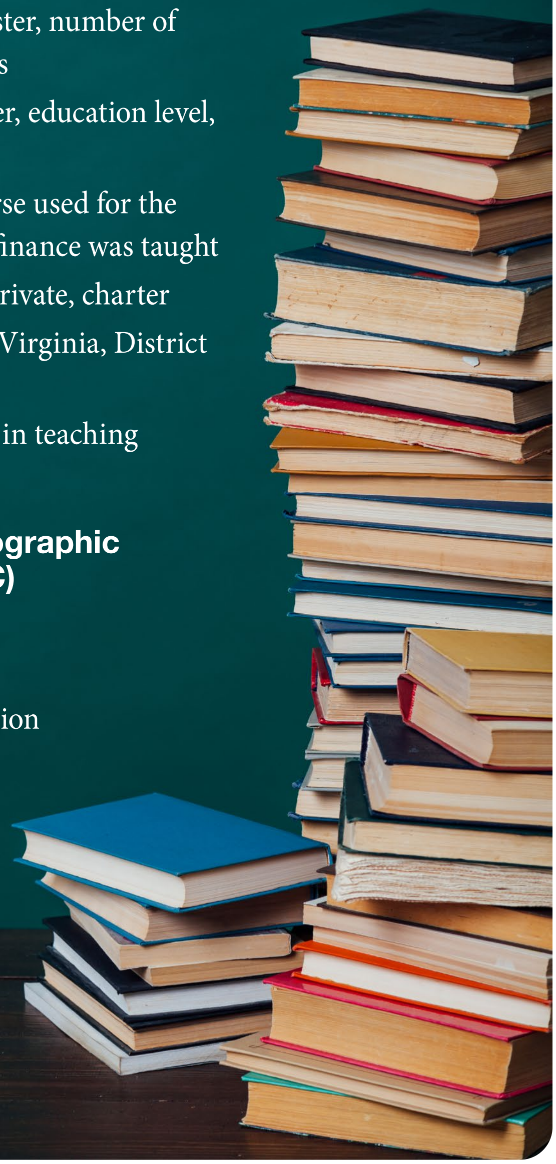
- Teacher Survey Instrument – the survey posed questions about teachers' knowledge, attitude and behavior about emergency funds, credit scores, saving habits, budgets and other personal finance issues. The instrument also asked about the teachers' professional backgrounds.
- Student Test – the questions addressed earning, spending, borrowing and other topics consistent with the Jump$tart standards.

Teacher Profile / Demographic Questions (Appendix B)

- Years teaching
- Prior training in financial literacy
- Length of personal finance unit offered to students - whole semester, number of months, number of weeks
- Demographics age, gender, education level, race
- The subject/name of course used for the study in which personal finance was taught
- Type of school - public, private, charter
- Jurisdiction - Maryland, Virginia, District of Columbia
- Self-efficacy - confidence in teaching personal finance

Student Profile / Demographic Questions (Appendix C)

- Demographics – age, gender, grade level, race
- Previous financial education
- Family education level
- Part-time job
- Account ownership



Additionally, both the teacher and the student surveys included profile/demographic questions. These questions helped account for factors other than the teachers' J$FFE training or the students' financial literacy instruction that might affect the teachers' and students' responses to our questions about personal finance.

E. Data Analysis

The teacher data was analyzed by comparing teacher responses in their first and second surveys, which included knowledge, attitude and behavior measures. In between the surveys, the teachers taught a semester without the benefit of the Jump$tart program, participated in the Jump$tart professional development and taught a second semester with the benefit of the program. The datasets were compared to spot items that demonstrated a change.

The student data also used a pre and post calculation but in a more sophisticated way, since two different sets of students were surveyed. After comparing pre-course and post-course student results for different students in both the spring and fall semesters, the magnitude of the change was noted. In other words, the change in measures of student knowledge, attitude and behavior within each semester were calculated and identified by individual teacher to see the impact of that teacher and the impact of the personal finance course on students in a particular semester. Then the direction and magnitude of the difference between the student scores across the two semesters was calculated for each teacher to shed light on the possible link between participation in the Jump$tart Financial Foundations program and the magnitude of the change in student scores. By calculating the difference between the two changes in the scores, we were able to better isolate the effect of the J$FFE teacher professional development.

F. Statistical Significance

With three distinct populations—spring semester students, fall semester students and teachers—taking multi-section surveys, on two occasions each, there bound to be variations in results across administrations of the surveys. The question, of course, was the significance of that change from the pre-survey, to the post-survey. Two well established techniques were deployed to assess the statistical significance of the data collected.

Paired T-tests: These were conducted for the student data for each semester. If the change in score from a section of the pre-survey to the same section of the post-survey was not large enough, the data was deemed not statistically significant. Likewise, if the change in a section of the teacher data from the beginning of the study to the end of the study was not large enough according to a paired T-test, that section of data was determined to be insignificant and was not included in further analysis.

Difference in Difference Model: To determine the ultimate question of whether the Jump$tart Financial Foundations for Educators professional development program made a statistically significant improvement for students of teachers who had been through the program, a "difference in difference" model analysis was used. This model first takes the difference in the mean pre-survey and post-survey scores for the control group, where teachers have not yet participated in the program (spring semester), and the same difference for the treatment group where teachers had participated in the program prior to teaching the course (fall semester).

The model then takes the difference of the differences between the treatment and control groups. Assuming no other factor (other than the intervention and variables controlled for) affected student test scores, this algebraic maneuver canceled out common factors such as the financial literacy course to isolate the effect of the professional development alone.

Appendix A shows the regression results of the difference in difference model as well as results from paired T-tests for critical parts of the study's data.

G. Bias Risk

We used an availability sample for this study. Because we did not randomly assign the students in our study to the control or treatment groups, we likely introduced some bias. For example, students who opt to take a course in personal finance in the second semester of a school year might be different than students who take the course in the fall.

Similarly, the teachers to whom we reached out are those who have already expressed an interest in personal finance or currently teach it. The characteristics of these teachers might vary from those of the general population of teachers. However, previous research in this area has used availability samples and, thus, our results will be comparable to these earlier studies.

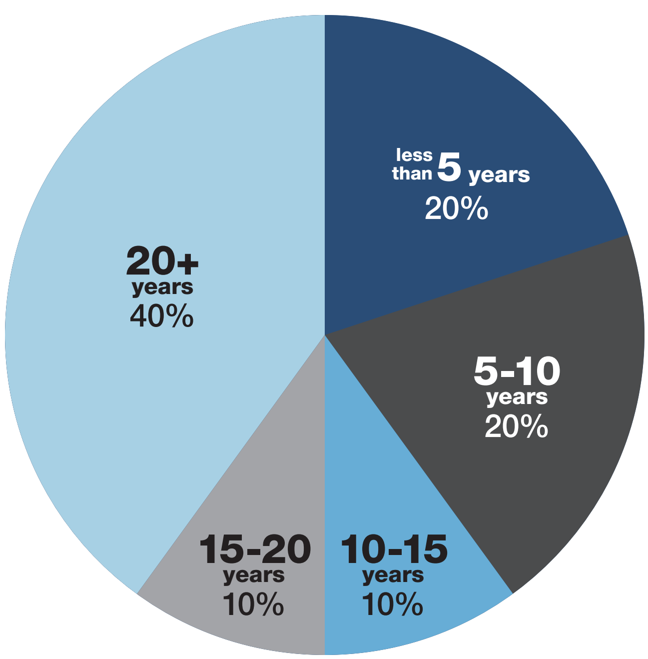
Because we used an availability sample, our ability to generalize our results will have some limitations. However, our availability sample does provide information on student changes in financial knowledge in response to the J$FFE program and our results will be suggestive of what we could expect from a random sample.

Findings

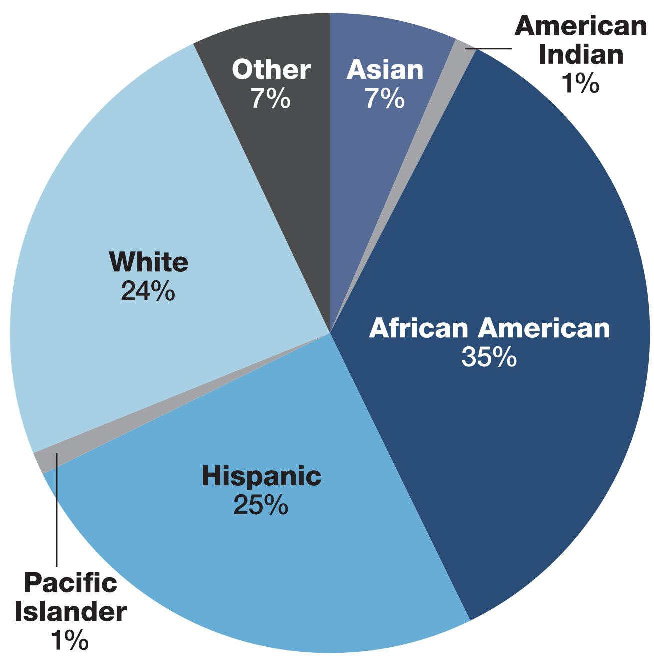
KEY TAKEAWAY The J$FFE professional development significantly increases the knowledge gains students achieve through personal finance courses. It also brings about behavior change on the part of teachers in managing their personal finances.

The results of this study are presented in five parts. First, the samples of teachers and students are reviewed. Second, the student performance is analyzed comparing the survey responses of students taught by teachers without the J$FFE professional development with students of teachers who had attended the J$FFE program. Third, we look for important intersections between the student and teacher data, focusing on areas where teachers changed their responses after the

Teacher Years of Experience



Student Demographic Breakdown



professional development and how that coincided with changes in student outcomes. Fourth, we discuss the teacher survey data in its own right. Finally, we analyze the qualitative findings from the teacher focus group and follow on, semi-structured interviews.

A. Profile of Teacher and Student Participants

The ten teachers that participated in this study reflected a diverse background with four of the teachers having 20 years or more of experience, four teachers having less than 10 years of experience and two having between 10 and 20 years of experience. Demographically, diversity was also present with four African American teachers and six white teachers, as well as eight female and two male teachers. Geographically, four teachers taught in Virginia schools where there is a state financial literacy mandate in place for high school students. Five of the study's teachers taught in Maryland school systems, some of which have financial literacy requirements. One teacher taught in the District of Columbia which does not have a financial literacy mandate.

The 557 students who participated in this study also brought a high level of diversity on several measures. Students were from each grade level of high school with 5% freshmen, 27% sophomores, 34% juniors and 34% seniors. The ethnic make-up of the group was 35% African American, 25% Hispanic, 24% white, 7% Asian, 1% American Indian / Alaska Native and1 % Native Hawaiian / Pacific Islander. There was also representation on the educational level of parents/ guardians, account ownership and prior exposure to financial literacy related coursework.

B. Student Results

1. Substantial Increase in Teacher Impact on Student Financial Knowledge

In this study, high school students of teachers without the benefit of the Jump$tart professional development registered an 8% average personal finance knowledge gain from their personal finance class. After receiving the J$FFE professional development, however, those same teachers increased their student impact threefold. Student knowledge scores increased by 24% between the beginning and end of the semester immediately following their teachers' participation in the J$FFE program. The training appeared to greatly amplify the course's positive effect on student knowledge. Moreover this large increase in teacher impact held up across different high school grade levels, genders and races. While students in all these subgroups benefitted from having a J$FFE attendee teaching their personal finance class, a comparison of some of these segments provides more insight into the kind of change the J$FFE program seemed to bring about.

a) Disproportionate Benefit to Students from Historically Underserved Populations

The positive student knowledge effect of the J$FFE professional development program was more pronounced on students from some communities that have been historically financially underserved. For example, African American students were impacted greater than the average student in the study. Specifically, African American students increased their financial knowledge from a financial literacy course by five percent when taught by a teacher who had yet to experience the J$FFE program. However, after receiving this professional development, teachers in the study saw their African American students raise their scores at four times the rate of the same demographic before participating in the program. By contrast, white students only doubled their knowledge gain after their teachers took part in the program, increasing their scores by 13% the first semester and by 29% in the second.

Similarly, teachers' impact on students from households with a lower level of educational attainment is substantially greater than those from households of higher educational attainment. Specifically, students from homes without a college educated parent or guardian experienced an increase in knowledge seven times that of students from households with a parent or guardian who attended college. A parent or guardian's level of educational attainment is frequently used as a rough proxy for household income. If that is the case here, it appears the J$FFE program equips teachers to be more effective in reaching the low income subset of the financially underserved population when compared to their higher income peers.

Finally, students without a relationship with a depository institution, also called "unbanked," improved their scores after being taught by a J$FFE-trained teacher to a greater degree than their banked classmates. Students with a bank account, debit card or credit card in their own names scored 11% better on a financial knowledge post-test when taught by a teacher before he or she went through the J$FFE program and 23% better when instructed by a teacher after he or she went through the program. By contrast, under the same scenario, unbanked students increased their improvement in scores from 4% to 26%.

Being African American, coming from a household without a college attendee and not having a bank account in one's own name all coincide with being financially underserved.[6] The fact that the J$FFE professional development program had a disproportionately positive impact on these groups provides a hopeful sign that the program can be part of bringing these young consumers into the financial mainstream through increased financial literacy.

Student Scores By Student Attribute

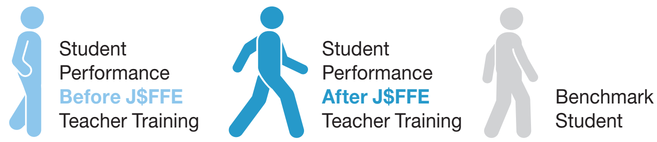
Difference in Student Scores within each Semester and the Change in the Difference Across Semesters

	Before Professional Development **PRE** vs **POST** score change	After Professional Development **PRE** vs **POST** score change	Change in difference between semesters
All	1.2 (8%)	3.1 (24%)	186%
Grade Level			
Freshmen	1.0 (10%)	11.9 (115%)	1027%
Sophomore	1.9 (12%)	4.2 (30%)	149%
Junior	0.6 (4%)	2.9 (24%)	516%
Senior	1.1 (8%)	2.3 (17%)	100%
Gender			
Male	1.6 (11%)	3.8 (28%)	154%
Female	1.0 (8%)	2.0 (17%)	116%
Prefer Not to Answer	-7.1 (-41%)	2.7 (18%)	144%
Race/Ethnicity			
Native American	-5.0 (-38%)	6.7 (50%)	230%
Asian	-0.4 (-2%)	2.0 (13%)	631%
African American	0.7 (5%)	2.5 (21%)	295%
Hispanic	1.9 (14%)	2.7 (25%)	75%
White	2.6 (13%)	4.7 (29%)	115%
Other	-0.7 (-5%)	0.8 (7%)	240%
Parents/Guardian Highest Education			
High School	-0.4 (-2%)	2.2 (17%)	822%
College Educated	1.5 (10%)	3.0 (23%)	115%
Prefer Not to Answer	1.5 (12%)	4.6 (37%)	214%
Previous Financial Education (PF/MM/Economics)			
Portion of a course/None	1.4 (10%)	3.1 (24%)	141%
Full semester course	0.6 (4%)	3.1 (24%)	455%
Has Part-time Job			
Yes	1.0 (6%)	2.8 (20%)	213%
No	1.1 (8%)	3.1 (25%)	203%
Has Bank Account, Credit Card, or Debit Card in Own Name			
Yes	1.6 (11%)	3.2 (23%)	115%
No	0.6 (4%)	3.2 (26%)	567%
Plans to Attend 4-year College After High School			
No	2.0 (14%)	3.0 (22%)	58%
Yes	-2.0 (-12%)	3.7 (31%)	350%
Prefer Not to Answer	0.6 (4%)	3.4 (32%)	654%
Course Type			
Single Semester	2.4 (16%)	4.4 (30%)	83%
Year-long	0.2 (2%)	2.3 (19%)	1052%

See full chart in Appendix J – Table 1

Gaining Ground

After their teachers received the J$FFE professional development, historically underserved groups narrowed or eliminated the gap between their rate of improvement in financial knowledge and that of certain benchmark groups.

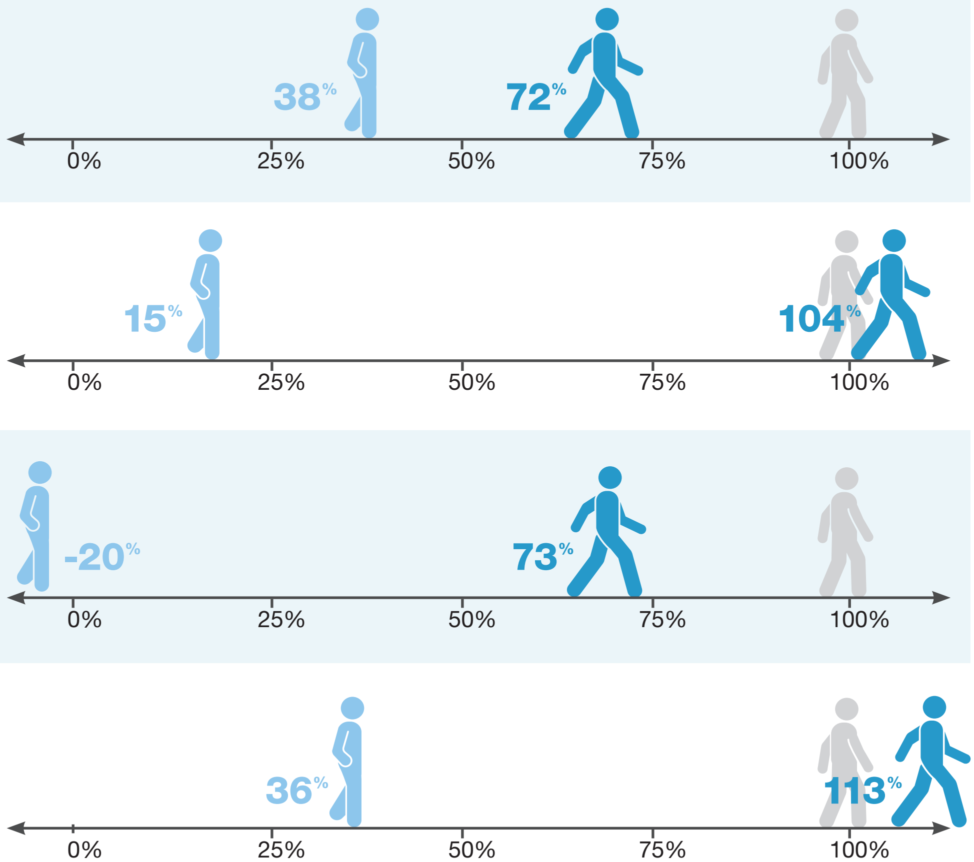


African American students' rate of financial knowledge improvement as a percentage of the knowledge gains of the **benchmark group (white students)**

The rate of financial knowledge improvement of **students with a less experienced teacher** as a percentage of the knowledge gains of the **benchmark group (students with a more experienced teacher)**

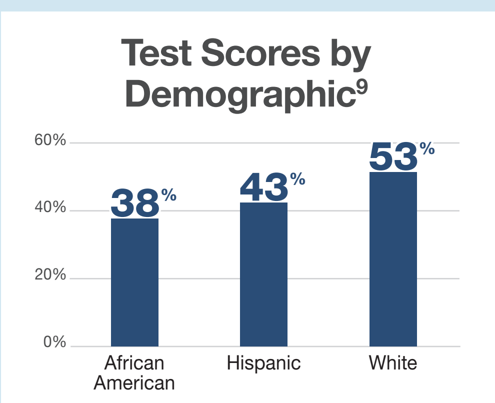
The rate of financial knowledge improvement of students from **households without a college attendee** as a percentage of the knowledge gains of the **benchmark group (students from college educated households)**

Unbanked students' rate of financial knowledge improvement as a percentage of the knowledge gains of the **benchmark group (banked students).**



Special Insight 1: Impacting Racial Disparity

For years financial literacy surveys have shown that African American and Hispanic adults lag their white counterparts. In a 2018 national study, the FINRA Foundation quizzed over 27,000 American adults on basic financial literacy concepts and found the results below.



While none of these groups achieved high financial literacy scores, the difference between the groups is significant. This matters because experts have discussed addressing this disparity through financial literacy programs as one part of a suite of policy solutions to help alleviate America's racial wealth gap. [8]

Against this backdrop, this study's findings with respect to minority students has added meaning. The results show that teachers exposed to the J$FFE program helped students from all demographics groups get more from their financial literacy courses. However, for African American students, the rate of increased improvement in financial literacy knowledge was more than twice that of white students and nearly four times that of Hispanic students. But how do these statistics square with teacher perceptions?

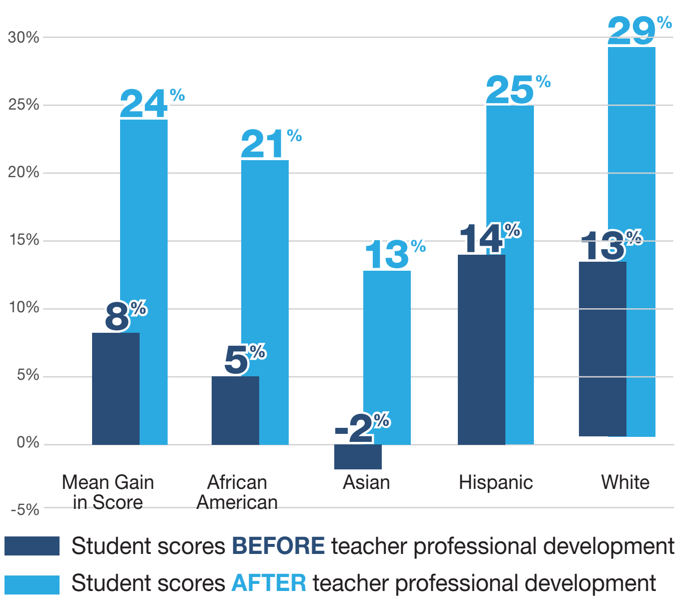
Before knowing the results of this study, one of the participating teachers said that after the J$FFE professional development he felt more confident to customize lessons to meet the specific needs of his students "who come from less privileged backgrounds…" He believed this may have "had a disproportionate impact on students of color" because, as he explained, "the vast majority of educational materials available target middle-class, white communities and don't take into account the needs of immigrant communities or communities of color."

While it is hoped this finding will inspire further research to better understand this phenomenon, the possibility that the J$FFE program may disproportionately help groups that need it most is an exciting prospect.

b) Less Experienced Teachers Improved Student Scores More

Teachers with less than 10 years of experience appeared to benefit more from the professional development based on their student's scores. Students of less experienced teachers improved their scores by 2% before their teachers participated in the J$FFE program and by 24% after. By contrast, teachers with 10 years of experience or more saw their students move from a 13% knowledge gain in the semester prior to the training to a 23% rise in scores in the semester immediately following the program.

Percentage of Gain by Demographic



Comparing the results of the relative impact of the two cohorts of teachers is revealing. Those educators with less than 10 years of experience had students who improved their scores more than students of teachers with 10 or more years of experience by a factor of 12. This suggests that the J$FFE can potentially help close the effectiveness gap between newer teachers and those with greater experience.

2. Student Scores on Financial Attitude and Behavior

As part of the pre and post surveys administered to all students in the study, there were a number of questions pertaining to financial attitude and financial behavior. To determine statistical significance, a paired T-test was conducted which concluded that the change in attitude and behavior scores due to the financial literacy course in the spring semester was not significant. While the difference between the pre and post survey scores in the fall semester was significant, the small difference in the spring semester limits the value of comparing the semesters.

While not used for analysis, the table of results for the student attitude and behavior parts of the survey have been placed in Appendix J and are included for general interest.

C. Specific Changes in Teacher's Confidence Impacting Change in Students' Knowledge

Previous studies show that providing educators professional development in personal finance increases their self-efficacy in teaching financial literacy topics.[7]. To further refine that finding and to link it to student performance, we combined the student and teacher data sets to perform a unique, but interesting analysis.

As described above teachers were surveyed at both the beginning and end of the study with the same instrument, with about a year between the two teacher survey administrations. This permitted comparisons of the teachers' responses to find changes that might have occurred. These changes might have been because of exposure to the professional development and the experience of teaching personal finance before and after the training. On any given survey question, some teachers changed their answers on the second survey and some did not. We isolated a handful of questions that pertained to financial well being and confidence and separated the teachers who changed their answers from those that did not. The responses to the selected questions were on a Likert scale, so we looked at whether a teacher "stepped" in a certain direction on the scale or remained the same. We then looked at the performance of the students of the "steppers" (those teachers who changed survey responses) and the students of the non-steppers.

According to survey results, teachers who increased their confidence in managing their financial future after the J$FFFE program had students who experienced gains in knowledge four times the gains of those of students whose teachers did not experience a confidence increase. The surveys revealed similar results for the students of teachers who experienced an improvement in their ability to enjoy life due to the way they manage money. Other teachers indicated in the surveys that they had improved their ability to manage an unexpected expense over the course of the study. The students of those teachers improved their scores substantially more than students of teachers who did not report an increase in their ability to manage an unexpected expense.

Teachers with less than 10 years of experience appeared to **benefit more** from the professional development based on their student's scores.

Two caveats are necessary with this analysis. First, a teacher might have answered strongly in the affirmative on a question in the first survey (i.e. can you come up with $2,000 in an emergency?) and kept that same answer in the second survey. Such a response would be reflected as a "no improvement" in this analysis since that teacher's answer could not and did not improve. The second caution is that since responses were used from only ten teachers, the statistical significance of this data is limited.

D. Teacher Statistical Analysis

Teachers were thoroughly surveyed at the beginning and end of the study. Generally that took place in January of 2019 and January 2020. Between the two administrations of the survey each teacher had the opportunity to teach personal finance in at least one course in the spring semester of 2019, participate in the J$FFE professional development program in the summer of 2019 and teach personal finance again to a different class of students in the fall semester of 2019.

During our design of the teacher survey we sought to use items that would allow comparisons to other populations at other times and in other geographies. Since the distinguishing feature of the J$FFE training is that it is meant to impact teachers both in and outside of the classroom, having comparisons to broader populations of Americans can be particularly relevant and enlightening.

For instance the six knowledge questions in the teacher survey are from the FINRA Foundation National Financial Capability Survey, which allowed us to compare teacher results with a national population and even regional results. The attitude section is taken from the Consumer Financial Protection Bureau's Financial Well Being research, which would permit us to compare teachers to other Americans. The survey also contains questions which allowed teachers to be compared to other American adults on a measure of "financial fragility" which indicates an individual's ability to absorb household financial shocks. Additionally, the instrument contained a number of more traditional items involving teacher confidence and preferences regarding the delivery of financial literacy lessons in the classroom. The teacher survey is shown as Appendix B.

Unfortunately, because of the demands of the study on teachers' time, it was challenging obtaining and maintaining a large number of educators in the study as described above. Many teachers committed to the study but then dropped out part of the way through because of time constraints or because their class schedules changed and they learned they wouldn't be teaching a fall course in personal finance. Some made it through the entire study, but upon close examination of their data collection practices, their data had to be eliminated from our analysis.

Student Results by Teacher Attribute

Difference in Student Scores within each Semester and the Change in the Difference Across Semesters

	Before Professional Development **PRE** vs **POST** score change	After Professional Development **PRE** vs **POST** score change	Change in difference between semesters
Teachers' Years of Teaching Experience			
Less than 10 years	0.3 (2%)	3.0 (24%)	987%
10 years or More	1.8 (13%)	3.1 (23%)	79%
Did the Teacher Have Improved Confidence in Securing Financial Future?			
No (No Change)	1.4 (9%)	3.2 (24%)	159%
Yes	-0.2 (-2%)	0.6 (9%)	623%
Did the Teacher Have Improved Ability in Managing Own Personal Finance?			
No (No Change)	1.1 (8%)	3.5 (26%)	245%
Yes	1.3 (11%)	1.9 (16%)	44%
Did the Teacher Have Improved Ability in Managing Unexpected Expense?			
No (No Change)	1.4 (9%)	3.3 (25%)	164%
Yes	0.0 (0%)	0.5 (7%)	3223%
Did the Teacher Have an Improvement in Enjoying Life Due to Way in Managing Money?			
No (No Change)	1.4 (9%)	3.2 (24%)	159%
Yes	-0.2 (2%)	0.6 (9%)	623%
Did the Teacher Have Improvement in Not Letting Finance Control Life?			
No (No Change)	1.3 (9%)	3.6 (27%)	199%
Yes	1.1 (8%)	1.9 (16%)	106%
Did the Teacher Have Improved Ability to Come up with $2,000 for an Emergency?			
No (No Change)	1.2 (8%)	3.2 (24%)	192%
Yes	0.4 (6%)	0.5 (6%)	5%

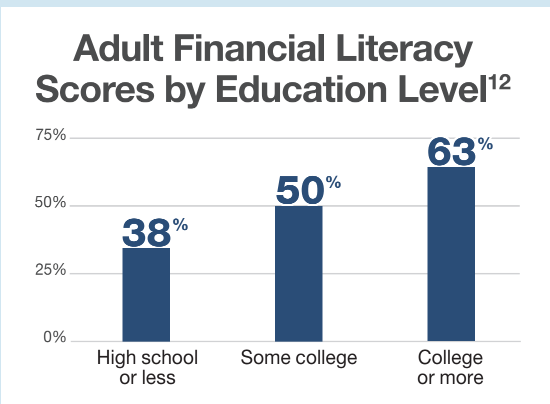
See full chart in Appendix I – Table 2

The consequence of this is that the robust plans for teacher data analysis in this study have been curtailed, as multiple paired T-tests of different parts of the teacher data all indicated that the results were not statistically significant due in part to the small sample size of teachers.

While not used for the analysis of this study, the table of teacher results (along with a number of useful calculations) are presented in Appendix I and are included for general interest.

Special Insight 2: Overcoming Differences in Household Educational Attainment

Adults without a postsecondary education consistently have lower financial literacy scores than college educated adults. When quizzed as part of a national study in 2018, 27,000 adults scored as shown below.

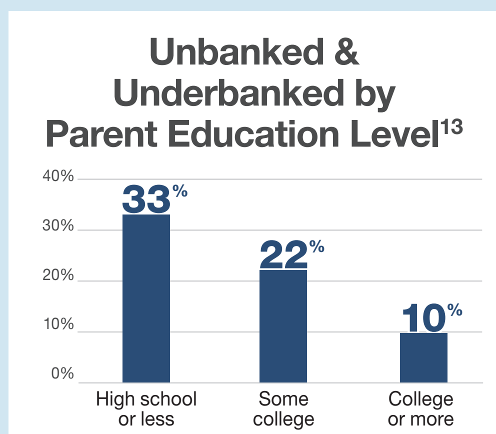


Financial Literacy by Level of Educational Attainment of Parent / Guardian

This matters because research shows that adults with lower levels of financial literacy are more likely to engage in a number of harmful financial behaviors including accruing fees and interest on credit cards, failing to build an emergency fund or to plan for retirement.[10] Moreover lower levels of educational attainment have been shown to be correlated with being one of the milllions of American adults who are unbanked or underbanked and live outside of the financial mainstream.[11]

Banking Status by Educational Level

It would seem, then, that for youth growing up in households with a lower level of educational attainment, the need for school based financial education is acute.



In the study, the J$FFE professional development program showed itself to be particularly effective with this population. Specifically, when taught by a J$FFE participant, students from households without a college attendee experienced an increase in their financial literacy knowledge seven times the amount of students with a college attendee at home. While both groups increased their financial literacy at a higher rate when taught by a J$FFE-attending teacher, the potential of the professional development program to help teachers close the gap between students from these two types of households is encouraging.

E. Teacher Focus Group

The focus group was an opportunity to pair contemporaneous, qualitative data with the statistical information that had been collected and add a dimension to the study's analysis. A summary of focus group findings is in Appendix E. The eight teachers that participated in the focus group shared unique insights that provided valuable context to the study and to the challenges facing teachers of personal finance. Specifically, the teachers made a number of observations that can best be summarized through three points.

1. Unrealistic Expectations Put on Teachers

Several teachers noted that they have been presumed to know a great deal about personal finance within their schools and even in many financial literacy professional development programs. A few said they had been asked to teach the subject in their high schools years ago and lacked the grounding they needed to go beyond the lesson, answer good questions or teach confidently.

Additionally, some noted that financial literacy training programs also presumed teachers had a command of the basics and the trainers would spend most of the time addressing the lessons offered by a specific program, or on pedagogy more generally. One teacher commented, "They taught a lot of information under the assumption that I as a teacher already knew the material in depth and they were teaching us how to teach the material but not 'what does it encompass.'" She went on "They assumed you came in with all of that background knowledge." A number of other teachers shared similar experiences.

2. The Applicability of the Program's Content and Teacher Focus was Valuable to Participants

Many of the focus group participants noted that the topics covered on the agenda and the practical approach of the instructors was not only valuable but refreshing compared to other trainings they have attended. One teacher that, in most programs, participants may find a few helpful nuggets that they can take and use. He said he walked away a with notebook and folder "full of nuggets." Speaking for the group, one teacher said of the sessions "That was truly straight up real world, because we all could relate to it in one way or another."

> The J$FFE professional development program appeared to serve as an **"activator"** that gave teachers the motivation to access new financial literacy content and introduce it to their students.

3. The J$FFE Program Inspired New Financial Awareness at Home and Change in the Classroom

Teachers described what happened after the training by describing how they began to think and act differently toward their own finances and began to try new things in the classroom.

One teacher said the program "made me begin to go through my benefits with the county. Instead of just sitting back and, you know, you know you have this and that benefit, this pension, life insurance. Maybe I need to review exactly what I have…" Another spoke about the value of the lessons she learned during the J$FFE program when she said "…I didn't think about retirement, IRAs, any of that. So now that planning for me, professionally, is preparing me for how to utilize my resources so that I can plan for my future professionally." A few members spoke about how this type of useful information is typically only shared by a financial professional in a sales context where one needs to be more cautious. They seemed to value having these important discussions in an environment where the only goal was to learn.

According to focus group participants, the professional development carried over to the classroom in the fall. "Coming in the summer and hearing a lot of those speakers, made me feel a lot more confident in what I was teaching" said one teacher. She went on saying that the program "gave me a little bit more of a secure feeling in what I might not have exactly understood." Another teacher said the J$FFE professional development program "allowed me to bring a new level of confidence in the classroom and start to have conversations with students and generally with other people."

Beyond increasing their self-efficacy, the J$FFE professional development program appeared to serve as an "activator" that gave teachers the motivation to access new financial literacy content and introduce it to their students. One teacher said "I started to swerve away from the textbook that I have for my class. I incorporated things that I knew, things that I have learned…" Another said "…when I go back to the classroom it's not just giving them, you know, a definition; it's here's an example, or here's a worksheet on how we're going to work together and how it would work in real life and that's how the kids will remember it better. And it's easier to teach it that way and takes the pressure off the teacher…"

With comments like these, it becomes easier to see how this small group of teachers went back to their classrooms after the J$FFE program confident, energized and equipped to have the kind of impact that would later show up in the improved student financial literacy scores we captured in this study.

F. Follow On, Semi-Structured Individual Teacher Interviews

A year after completing their last survey for the study and administering the last test to students, four teachers from the study were interviewed for their views on a few topics to determine if the passage of time would reveal anything further about any potential effect of the J$FFE professional development program. It appears that the intervening time gave the seeds sewn in the J$FFE session time to take root.

1) Teachers Turned Personal Finance Plans into Action

In the focus group nine months earlier, some teachers reported thinking differently about personal finances as a result of the training. We found as time passed

though, teachers began to take more concrete steps in their own lives to improve their finances. The teachers we spoke to attributed this to the J$FFE program or, as one teacher reflected, "the training pulled something out of me to go make some moves."

One teacher early in his career said "I took away more of an understanding and motivation to figure out my own personal finances. After the training, I had a new mental outlook: I can change my personal financial standing." He then gave numerous examples of how that sense of empowerment had grown since we last spoke to him nine months earlier. First, he told us with pride how he set up a summer fund. As part of the arrangement, he authorized deductions from his pay each month, which were directed to a fund during the 10 months he received paychecks, so he would receive an equal amount of income every month, including in his two months off in which he is not paid by his school. Second, he said he took the advice he remembers from the investing session of the J$FFE program and maxed out his contributions to his employer retirement program. Third, he said he used what he learned from what he calls "the Experian presentation" to consolidate and eventually eliminate his credit card debt and increase his credit score nearly 200 points.

Another educator who described herself as formerly being "shaky on insurance" cited the J$FFE session on insurance as the reason she re-assessed her own risk and eventually purchased disability and term life insurance coverage beyond what her employer offered.

Still another teacher with nearly 20 years' experience said the "training enhanced my personal life" and gave examples of how she took her new interest in personal finance and shared it with her family. She said that last summer all the adult members of her family started a five-year debt reduction challenge. She also said her family now follows their investments together and that she even opened a brokerage account for her granddaughter in middle school.

One last teacher said the professional development helped increase her financial awareness. After the program, she noticed she was more conscious of what she bought. She stated that she began reducing her impulse purchases and, eventually, the balance on her credit cards.

2) Teachers Continued to Make Connections from the J$FFE Professional Development to the Classroom

Teachers indicated that the training not only led to better financial decisions at home, but that it increased their comfort with financial topics in general. They said this encouraged them to explore new financial topics and present them to their students. One teacher said that she was inspired to add a unit on insurance after the professional development. Another that she added lessons on budgeting to her course as a result of her newfound financial awareness and confidence.

Not all of the benefits of the program are as obvious as new topics on a syllabus. One of the teachers said that after the J$FFE professional development she felt like she had greater confidence and personal ownership of the topic. This gave her the motivation to seek out more personal finance information for herself and her students. She said, over time, she noticed that she had become less of a conduit for books and teaching materials, but actually more of a primary source of not just knowledge, but influence for her students. "If I can teach and you can see the passion on my face, it helps." she stated. She reflected that she feels that she is now simply more effective because she is more persuasive to her students who may not always take financial lessons to heart.

Special Insight 3: Does Distance Teaching Equal Distance Learning? The Challenges of Virtual School

The COVID-19 pandemic occurred just as our study was wrapping up in-class student data collection, but before our teacher focus groups and follow-on interviews. This gave us the unexpected chance to learn about a phenomenon that wasn't directly related to the J$FFE professional development, but is something that is timely and that could have implications for remote delivery of financial literacy instruction in the future. Since we had this unique opportunity, we collected the qualitative data and included it here.

Teachers identified three recurring themes when describing the challenges to educating their students remotely.

First, teachers found a general level of passivity among students in class. One teacher put it bluntly saying "The students are not as involved as they should be; there is a serious lack of engagement across the board." In response, teachers would frequently attempt new techniques with varying levels of success, including the use of interactive on-line materials, videos, virtual field trips and greater use of differentiated instruction to see what might engage hard-to-reach students. "I try to make lessons exciting and engaging" one teacher offered, "but the intrinsic motivation just isn't there, or it seems to be disappearing as the year wears on." Another teacher noticed that the amount of home support mattered a great deal to a student's likelihood to take an active part in the virtual classroom. He said, "The students with parents at home are thriving, and the students that need more support have suffered."

Second, teachers have found that students from economically challenged circumstances are more likely to need to work during school hours. In some cases these students are technically "attending" the virtual class session, but with school rules in place prohibiting teachers requiring camera usage, students may actually be at work during class. Teachers may get a brief glimpse of a student's background when the camera is accidentally engaged or can hear the background sounds of a workplace when a student comes off of mute to answer a question. Multiple teachers reported that in every class session at least a handful of students are "there, but not present" during instruction, as they attempt to work at a job while in class. This kind of "virtual truancy" is a new challenge of remote learning and something some teachers in this study suspect is disproportionately affecting low income students.

Finally, English Language Learners ("ELL") appear to be especially disadvantaged in the virtual classroom. One teacher revealed, "ELL students are hard to work with remotely. In a normal classroom, I would break them into small groups with a bilingual student to help them. I can't do that in the virtual environment." Another teacher shared that she had similar struggles with the ELL population and tried to make up for it with more individualized attention. She said, "I take a lot of one-on-one calls with my ELL students to keep them engaged and on time with their work." Overall, teachers agreed that, despite their best efforts, they feared that non-native English speakers are at a significantly greater risk of falling behind and staying behind under a distance learning regime relative to their native English-speaking peers.

While these three challenges with virtual education are only a brief list of the problems teachers have experienced over the last two school years, we hope this analysis provides a good early take on what we will likely hear more about in future research. As more students return to in-person learning in the months ahead, researchers, practitioners and policy makers will begin to render judgment on, and learn lessons from, unexpected national experiment in distance education. These conclusions will have important implications for instruction of students and professional development of teachers for all subjects, including financial literacy.

Areas for Additional Research

There are a number of worthy research topics related to improving classroom instruction in financial literacy and the best professional development approaches to support it.

The best way to prepare financial education teachers for the classroom may be dependent on the course being taught in that classroom. Some subjects in this study taught financial literacy in a stand-alone course while others taught personal finance topics within another course. Determining which approach is more effective for students is an important inquiry and might influence the design and content of future professional development.

Another possible avenue of inquiry was revealed by the finding that students of teachers with less experience appeared to benefit more from their teachers' participation in the J$FFE professional development program. Would that phenomenon hold for other forms of financial literacy professional development or was that outcome driven by the fact that the content-focus of the J$FFE program was more impactful for newer educators?

As it was configured in this study, the J$FFE relied on in-person and on-line elements. Future research might seek to determine the optimal mix of in-person and virtual learning for professional development. With the majority of American K-12 students and teachers suddenly thrust into a 100% distance learning model because of the COVID-19 pandemic, there will be fertile ground for numerous student impact studies. Many will probe how much students have learned all subjects, including personal finance, in a virtual environment versus an in-person model. What may receive less attention is how the lurch to distance learning should inform professional development. Pedagogical techniques that are more conducive to teaching in a virtual classroom will draw the scrutiny of researchers. However, there is another analysis that might be just as intriguing and useful to the field. Are professional development programs that focus on content knowledge more robust in their impact because they are platform neutral? This is an issue worthy of investigation in light of the findings of this study and the post-pandemic teaching environment still taking shape.

Finally, the most important additional research that might arise from this study is simply attempting to replicate these results on a larger, national scale with randomly selected participants.

Conclusion

The field of financial education can learn a lot from the proven effectiveness of content-based, teacher-focused professional development like the J$FFE program. Presently, most teacher professional development consists of instruction in pedagogy, curriculum-specific lessons and activities for students. Some of these traditional trainings have shown positive results for both students and teachers. However, because of the findings of this research, it might now be reasonable to ask if those trainings would be more impactful for students if they were provided *after* teachers were first instructed in the content of personal finance, as they are in the Jump$tart Financial Foundations for Educators professional development program. Based upon what we have discovered in this study, perhaps all future financial literacy professional development should be preceded by a content-based, teacher-focused program as a universal prerequisite if we wish to truly change the game in youth financial education.

Endnotes

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2 Hensley, W., 2013. "Content-Based Teacher Professional Development."

3 Hensley, W. and Pelletier, J., 2015. "Prepped for Success."

4 Hensley and Pelletier, "Prepped."

5 Hensley and Pelletier, "Prepped."

6 *How America Banks: Household Use of Banking and Financial Services,* FDIC (2019); *Report on the Economic Well Being of U.S. Households in 2018*, Federal Reserve Board (2019).

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8 Epperson, S. and Fox, M. (2020). This Critical Link Could Help Bridge America's Racial Wealth Gap. CNBC. Retrieved March 1, 2021, from https://www.cnbc.com/2020/06/26/this-critical-link-could-help-bridge-americas-racial-wealth-gap.html. Lusardi, A., 2005. "Financial Education and the Saving Behavior of African-American and Hispanic Households" p. 30. "One finding that emerges throughout the paper is that the financial behavior of African-Americans and Hispanics is very different than the behavior of Whites. Thus, to be effective, financial education programs should be tailored to these groups of the population and address lack of financial knowledge and experience in dealing with financial markets." Lusardi, A., "Saving Behavior". *See also* Lusardi, A., Pierre-Carl, M. and Mitchell, O.S, 2017. "Optimal Financial Knowledge and Wealth Inequality," *Journal of Political Economy* 125(2). Provides a general discussion of financial literacy and wealth differentials.

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10 Wagner, J., and Walstad, W. B. (2018). "The effects of financial education on short-term and long-term financial behaviors." *Journal of Consumer Affairs*. Harvey, M. (2017). "Impact of financial education mandates on younger consumers' use of alternative financial services." Available at SSRN: https://ssrn.com/abstract=3054379. Walstad, W., Urban, C., Asarta, C.J., Breitbach, E., Bosshardt, W., Heath, J., O'Neill, B., Wagner, J., & Xiao, J. J. (2017). "Perspectives on evaluation in financial education: Landscape, issues, and studies." *The Journal of Economic Education*, 48(2), 93-112. Lusardi, A., & Mitchell, O. S. (2011). "Financial literacy and retirement planning in the United States." *Journal of Pension Economics & Finance*, 10(4), 509-525. Lusardi, A., Mitchell, O. S., & Curto, V. (2010). "Financial literacy among the young." *Journal of Consumer Affairs*, 44(2), 358-380.

11 *Report on the Economic Well Being of U.S. Households in 2018*, Federal Reserve Board (2019), p. 25.

12 *The State of U.S. Financial Capability: The 2018 National Financial Capability Study,* FINRA Investor Education Foundation (2019), p. 35.

13 *Economic Well Being*, Federal Reserve Board, p. 26.

Appendix A
Statistical Significance

Financial Knowledge Score - Difference in Differences Model

A difference in differences model is implemented to estimate the effects of the J$FFE training by comparing the change in the differences in observed test scores between pre- and post-test, across pre-treatment (spring) and post-treatment (fall) periods.

In the first model, all controls are now statistically significant at the 5% level. The Post-test coefficient can be translated as such: on average, post-test scores are 1.2 points higher than pre-test scores regardless of the training. The Fall Semester coefficient suggests that scores on average in the fall semester is 1.3 points lower than in the spring semester. Looking at the coefficient of the interaction variable, it indicates that the effect of the training by itself brings about 1.9 points increase in score.

The second model, which controls for various factors such grade level, race and ethnicity, etc., tells a similar story. Post-test scores on average are higher than pre-test scores, while average score in the fall semester is lower than the spring semester. The second model still find a 1.9-point increase in scores due to the effect of the training. These three variables are all significant at least the 5% level and Fall Semester at the 1% level.

Control variables that are statistically significant are female, other race, unknown race, freshmen, and teacher's teaching experience. The female coefficient suggests that female students on average score 0.5 point lower than male students, significant at the 1% level. Students of unknown racial background and minority students on average have a lower baseline score than white students, all groups are significant except the Asian group. Freshmen students on average score 3.3 points lower than senior students. Students taught by teachers with at least 10 years of experience on average score 3.6 points lower than students taught by teachers with less than 10 years of experience.

	Knowledge Score (1)		Knowledge Score (2)	
Post-test	1.2	*	1.1	*
	(0.6)		(0.5)	
Fall Semester	-1.3	*	-2.1	***
	(0.6)		(0.5)	
(Post-test) x (Fall Semester)	1.9	*	1.9	*
	(0.8)		(0.7)	
Part-time Job			0.4	
			(0.4)	
Bank Account/Debit Card			0.2	
			(0.4)	
Female			0.5	
			(0.4)	

	Knowledge Score (1)		Knowledge Score (2)	
Gender N/A			-1.1	
			(1.4)	
Plan to Attend 4-year College			0.5	
			(0.4)	
Asian			-1.6	
			(0.9)	
Affrican American			-4.1	***
			(0.6)	
Hispanic			-3.3	***
			(0.6)	
Other / Preferred Not to Answer			-4.4	***
			(0.8)	
Parents' Highest Education Attainment: High School			0.1	
			(0.5)	
Parents' Highest Education Attainment: Preferred Not to Answer			-0.2	
			(0.6)	
Public School			-6.5	***
			(0.7)	
Freshmen			-3.3	***
			(0.9)	
Sophomore			-1.5	**
			(0.6)	
Junior			-0.9	
			(0.5)	
Teachers' Teaching Experience: > 10 years			-3.6	***
			(0.5)	
Sample Size	1114		1114	
R2	0.03		0.26	

Limitations of the Analysis

While the nature of the J$FFE initiative appears to be a natural candidate for the difference in differences model, this approach has constraints not fully met by the study. This study measures the control and experimental groups at different time periods, which may result in unobservable or uncontrollable factors that can skew the outcome. For example, if there was a popular television show airing in the fall semester that covers financial literacy topics unbeknownst to the principals of the study, it may increase the average post-scores, but the gain may be attributed to the training instead. However, if the groups were conducted simultaneously, both groups would be exposed to the show, and thus cancelling its effect. To mitigate this issue, the DiD model implemented in this study attempts to cover a variety of relevant variables that may affect test scores.

Another limitation of this study is not capturing the income of students' parents. Studies have shown students with higher income parents are more financially literate. To address the importance of parental wealth in financial literacy, this study uses proxies such as parent's highest education attainment and students' school type instead.

Paired T-tests

A paired t-test was conducted for each semester to further examine the score differentials. This test compares the mean differences between pre- and post-test scores from the same set of students to determine whether the differences are statistically significant. The results from the spring semester paired t-test suggests the differences between pre- (mean = 14.40, SD = 0.37) and post-test (mean = 15.59, SD = 0.48) are significant with a t-statistic of 3.39, p-value of 0.00, and 283 degrees of freedom. In other words, there is only less than 0.1% probability that the differences are a result of chance.

The paired t-test for the fall semester suggests the mean score differences are also statistically significant with a t-statistic of 8.42, p-value of 0.00, and 268 degrees of freedom. Post-test scores (mean = 16.08, SD = 0.47), on average, are 3.1 points higher than pre-test scores (mean = 12.99, SD = 0.35). The result shows there is only less than 0.1% probability that the differences are due to chance as well.

Appendix B
Teacher Instrument and Answer Key

The teacher survey was administered electronically to study teachers at the beginning and end of the study, roughly one year apart. The survey provided both a baseline and a measurement of the teachers' response to the J$FFE training.

The answers highlighted in blue are the correct answers (where applicable).

Q1 Where is your school located?

District of Columbia	Maryland	Virginia	Other

Q2 In which type of setting do you teach?

Charter School	Public School	Private School	Other (please specify	

Q3 What is your teaching certification area? Check all that apply

Business or Marketing Education	Career & Technical Education	English Language Arts	Math	Social Studies

Q4 What is the total number of years you have been teaching in the classroom?

Less than 5 years	6 to 10 years	11 to 15 years	16 to 20 years	20+ years

Q5 What is the full name of the course in which you will be conducting personal finance lessons?

Q6 How many of your class periods will you include in this study during spring semester 2019?

one	two	three	four	five

Q7 Please estimate the total number of students you intend to include in this study during spring 2019:

Q8 To your knowledge, have these students had personal finance instruction before this class?

Yes	No	I don't know

Q9 In what area of your school's curriculum will this course or subject matter be delivered? (Choose all that apply)

Business Education and/or Marketing Education	Career & Technical Education	English Language Arts	Math	Social Studies

Q10 From the list of providers below, which ones do you use to teach personal finance content to students? (Choose as many as apply to your course)

"Get Smart about Credit" or any financial education lessons from the American Banking	Association	"Better Money Habits" - lessons by Bank of America	"Youth Financial Capability Activities" - Consumer Financial Protection Bureau (CFPB)	Any financial education lessons from National Credit Union Administration (NCUA)

Q11 Please list (by frequency of use) the top three providers of financial education materials that you use in your classroom in the space below.

Q12 How do you deliver personal finance content lessons to students? (Choose all that apply)

Textbook	Online modules that are completed individually by students	Curriculum downloaded by the teacher and delivered through lecture/whole class	instruction/activities	Other (please specify)

Q13 How is the topic of personal finance offered in your school/district? (Choose only one)

Stand-alone course that is required to graduate from high school so each student must enroll	"Topic is required to be embedded into a required course that already exists so each student is exposed to the subject"	"As a course that is expected to be completed by a student enrolled in an academy or established pathway program (i.e. National Academy Foundation [NAF] or business program course, etc.)"	"No requirement for this course or this topic to be taught, but I incorporate it into my classes"	Other

Q14 What types of professional development have you attended that were solely focused on personal finance education? (Please choose all that apply)

one hour session(s) at a state or national conference	local or state workshop for teachers that was required	local or state workshop for teachers that was voluntary	full day training	multi-day training

Q15 What is the one area of personal finance you enjoy teaching the most?

Spending and Saving	Credit and Debt	Employment and Income	Investing	Risk Management and Insurance

Q16 What is one area of personal finance you least like to teach?

Spending and Saving	Credit and Debt	Employment and Income	Investing	Risk Management and Insurance

How well do the following statements describe you?

Q17 I feel confident in the knowledge base I have to teach personal finance to students.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Q18 I feel confident in my ability to manage my own personal finances.

Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

Q19 I can handle a major unexpected expense

Completely	Very Well	Somewhat	Very Little	Not At All

Q20 I am securing my financial future

Completely	Very Well	Somewhat	Very Little	Not At All

Q21 Because of my money situation, I feel like I will never have the things I want in life

Completely	Very Well	Somewhat	Very Little	Not At All

Q22 I can enjoy life because of the way I'm managing my money

Completely	Very Well	Somewhat	Very Little	Not At All

Q23 I am concerned that the money I have or the money I will save will not last.

Completely	Very Well	Somewhat	Very Little	Not At All

Q24 I am just getting by financially.

Always	Often	Sometimes	Rarely	Never

Q25 Giving a gift for a wedding, birthday or other occasion would put a strain on my finances for the month

Always	Often	Sometimes	Rarely	Never

Q26 I have money left over at the end of the month

Always	Often	Sometimes	Rarely	Never

Q27 I am behind with my finances

Always	Often	Sometimes	Rarely	Never

Q28 My finances control my life.

Always	Often	Sometimes	Rarely	Never

Q29 How confident are you that you could come up with $2,000 if an unexpected need arose within the next month?

I am certain I could come up with the $2,000	I could probably come up with the $2,000	I could probably not come up with the $2,000	I am certain I could not come up with the $2,000

Q30 Suppose that you have an emergency expense that costs $400. Based on your current financial situation, how would you pay for this expense? If you would choose more than one method to cover this expense, please select all that apply.

Put it on my credit card and pay it off in full at the next statement	Put it on my credit card and pay if off over time	Using the money currently in my checking/savings account or with cash	Using money from a bank loan or line of credit	By borrowing from a friend or family member

Q31 Have you set aside emergency or rainy day funds that would cover your expenses for 3 months in case of sickness, job loss, economic downturn, or other emergencies?

Yes	No

Q32 I put money into a retirement account with every paycheck.

Yes	No

Q33 In the past six months, I have reviewed my credit report from at least one of the credit reporting agencies.

Yes	No

Q34 I know what my current credit score is.

Yes	No

Q35 I or someone on my behalf has drafted and recorded my last will and testament.

Yes	No

Q36 I periodically review your retirement account allocations?

Yes	No

Q37 Have you ever used the services of a financial planner or adviser?

Yes	No

Q38 If you answered yes to question #40, do you know how he/she was compensated?

Yes	No	The scenario on question #37 does not apply to me.

Q39 Suppose you have $100 in a savings account earning 2% interest per year. After five years, how much would you have?

More than $102	Exactly $102	Less than $102	I Don't Know

Q40 Imagine that the interest rate on your savings account is 1 percent a year and inflation is 2 percent a year. After one year, would the money in the account buy more than it does today, exactly the same or less than today?

More	Same	Less	I Don't Know

Q41 If interest rates rise, what will typically happen to bond prices?

Rise	Fall	Stay the same	No relationship	I don't know

Q42 A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest over the life of the loan will be less.

True	False	I Don't Know

Q43 Buying a single company's stock usually provides a safer return than a stock mutual fund.

True	False	I Don't Know

Q44 Suppose you owe $1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?

less than 2 years	2 to 4 years	5 to 9 years	10 or more years	I don't know

Please help us out by answering a few profile questions:

Q45 What is the highest level of education you have completed?

Associate's degree	Bachelor's degree	Bachelor's degree +	Master's degree	Master's degree +

Q46 What is your approximate salary?

$25,000 - $35,000	$35,001 - $45,000	$45,001 - $55,000	$55,001 - $65,000	$65,001 - $75,000

Q47 How do you describe yourself?

White or Caucasian	Black or African American	Hispanic or Latino	Asian or Asian American	American Indian or Alaska Native

Q48 Please indicate your gender:

Male	Female	Prefer not to answer

"The following three final questions are used only to make sure the right person is answering this survey & getting credit toward her/his teacher stipend. It will not be released or associated with the confidential responses to this survey."

Q49 Please tell us your first and last name

Q50 Please enter you email address below

Q51 What is the name of the school where you teach?

Q52 What is the length of the course where you will conduct the pre/post tests of financial knowledge?

Full year course that started in Fall Semester 2019 where students earn one full credit	Semester course that started in Fall 2019 where students receive one full credit	Semester course that started in Fall 2019 where students receive half-credit	Other (please specify)

Appendix C
Student Instrument and Answer Key

The student survey was administered electronically to the students at the beginning and end of each semester by their classroom teachers. This survey measured the students' financial knowledge, attitudes, and behavior before and after receiving financial literacy instruction.

The answers highlighted in blue are the correct answers (where applicable).

Q1 Create your personal ID Code

Example: EW05

Q2 Please select the class period that you are in, for the purpose of taking this post-test during the 2019-2020 school year.

Class pd 1	Class pd 2	Class pd 3	Class pd 4	Class pd 5

Q3 Beginning to save while you are young is recommended by financial experts because

you can lock in higher interest rates when you buy on credit	the younger years tend to be the highest earning year's of one's life	banks pay higher rates of interest to youngper people than they pay to those who are older	money saved early in life increases through compound interest over a long period of time	I don't know

Q4 If you get an email from your bank that includes its official logo and the content of the mail asks for your account number, what should you do?

Don't reply to the email	Reply by email and keep a copy of your correspondence	If the email looks genuine, send them the information they requested	Give them the account number but never give them your Social Security Number	I don't know

Q5 Hannah rents an apartment and pays for her food while attending college. She works at a part-time job to earn money to help pay for her living expenses and college education. She keeps a budget to record her

profits and losses	costs and benefits	assets and liabilities	income and expenses	I don't know

Q6 If a borrower chooses to pay back a car loan over a longer period of time, the monthly payment is generally

lower and the total interest paid is lower	lower and the total interest paid is higher.	higher and the total interest paid is lower	higher and the total interest paid is higher	I don't know

Q7 With insurance, it is generally the case that the higher the deductible,

the lower the premium that you will pay	the higher the premium that you will pay	the more the insurance company will pay out	the less you owe when you must make a claim	I don't know

Q8 Jacob opens a savings account and deposits $500. If the savings account has a fixed annual interest rate of 5 percent, and he makes no additional deposits or withdrawals, what amount will Jacob have in his savings account at the end of two years?

exactly $50	exactly $550	less than $550	**more than $550**	I don't know

Q9 Which is the most diversified investment?

A house	A company stock	A corporate bond	**A stock mutual fund**	I don't know

Q10 Which is an advantage of renting rather than owning a home?

Renters have greater mobility and fewer initial costs.	When major repairs are needed, renters generally pay for them.	If housing prices increase, renters do not share in the financial gain.	Renters are subject to rent increases over which they have little control.	I don't know

Q11 Which is most likely to result from an increase in the demand for software developers?

an increase in the wage of software developers	an increase in unemployed software developers	a decrease in the supply of software	a decrease in the price of software	I don't know

Q12 These are Maria's recent checking account transactions: *image of check register is shown. After Maria writes a check to Style Stop Clothing, what is her new balance?

$450	$500	**$550**	$600	I don't know

Q13 Which of the following credit card users is likely to pay the greatest dollar amount in finance charges per year if each charges the same amount per year on his or her cards?

Emily, who only pays the minimum amount due each month.	Marquice, who always pays his credit card bill in full shortly after he receives it.	Jackston, who pays at least the minimum amount due each month and more when he has the money.	Taylor, who generally pays her credit card bill in full, but occasionally will pay the minimum when she is short of cash.	I don't know

Q14 Brandon backs his car into a metal fence, causing $500 of damage to his car. Brandon has an auto insurance poicy with a $200 deductible. To get his car fixed, how much will his auto insurance company pay?

$0	$200	**$300**	$500	I don't know

Q15 Austin needs to have $4,500 two years from now to go to college. Which strategy is most likely to achieve that goal?

Save $4,000 now and invest in a two year certificate of deposit that earns 7 percent per year.	Save $4,200 a year from now and invest in a saving account that earns 3 percent per year.	Save $3,000 now and $1,000 one year from now, investing the funds in a money market account htat earns 5 percent per year.	Save $2,000 now and $2,000 one year from now, investing the funds in a money market account that earns 5 percent per year.	I don't know

Q16 On average, over a lifetime, a person with a college degree earns

less than a person with just a high school diploma.	approximately one million dollars more than someone with only a high school diploma.	nearly double what is earned by someone with just a high school diploma.	just enough money to cover the costs of tuition and course fees for the degree.	I don't know

Q17 Samantha's bank bounces her check because of insufficient funds. Besides covering the amount of the check, Samnatha will likely have to

file a police report.	pay a fee to her bank.	open a savings account.	file a report with the Federal Deposit Insurance Corporation (FDIC).	I don't know

Q18 Sarah is a recent college graduate who has a credit card and a cell phone in her own name. She often paid her bills late and sometimes missed a payment when she was a college student. If she applies for a car loan now that she has her first job, what will the effect of her money mangement during her college years have on her current credit record and score?

Sarah will probably be charged a high interest rate.	There will be no effect because the government guarantees car loans.	Sarah will be a favored borrower because she has an established credit history.	Sarah's credit record in college will be erased when she starts her first job.	I don't know

Q19 While driving to work, Harrison swerved to miss a dog and drove into a tree. Harrison and the dog are fine, but it will be expensive to repair the damage to his car. What type of automobile insurance coverage will provide reimbursement for damages to Harrison's car?

Liability	Medical	Collision	Comprehensive	I don't know

Q20 What is the general relationship between financial risk and financial return?

The amount of risk does not influence potential financial return.	The lower the financial risk, the higher the potential financial return.	The higher the financial risk, the lower the potential financial return.	The higher the financial risk, the higher the potential financial return.	I don't know

Q21 Which statement is correct?

Mutual funds pay a guaranteed rate of return.	When people invest in a mutual fund, they cannot withdraw the money for one month.	A stock mutual fund combines the money of many investors to buy a variety of stocks.	A mutual fund that invests in foreign stocks will always deliver a higher return than a mutual fund that invests in domestic stocks.	I don't know

Q22 Inflation can cause difficulty in many ways. Which group would have the greatest problem during periods of high inflation?

Young working couples with children	Young working couples with no children	Older working couples saving for retirement	Older, retired couples living on a fixed income	I don't know

Q23 Damon uses a debit card for his purchases and direct deposit for his paycheck. Both the debit card and the direct deposit involve:

selling and buying stocks in the marketplace.	the securing of credit and payment of interest.	electronic transfers to or from his checking account.	transaction fees regardless of where the transaction occurred.	I don't know

Q24 In general, who would most need life insurance?

a single person just beginning a career	a young married couple with small children	a retired person who is married and has investments	a working couple with grown children living on their own	I don't know

Q25 Alexis puts $100 in a savings account that pays her 5% interest. Inflation is running at 2%. What is the real return on the money Alexis has in her savings account?

About 2%	About 3%	About 5%	About 7%	I don't know

Q26 Latasha adds $500 to her retirement savings bank account every year for 10 years. Marcus decides to wait 10 years when he knows he will have a lump sum of $5,000 to save in his retirement savings bank account. If both Latasha and Marcus earn 3 percent annual interest on their accounts, who will have the larger account balance in 20 years?

Marcus, because Latasha saved little each year	Marcus, because his starting amount is bigger than Latasha's savings	Latasha, because her money has grown for a longer time with compounding interest	" They would have the same amount because they invested the same amount of money."	I don't know

Q27 Andrew's take-home pay from his job at the bank is less than the total amount he earns. Which best describes what is taken out of his total pay?

Social Security and Medicaid contributions	Federal income tax, Social Security, and Medicare contributions	Federal income tax, Social Security, and Medicare contributions	Federal income tax, property tax, Medicare, and Social Security contributions	I don't know

Q28 Elizabeth is going on a business trip to both London and Tokyo in the next month. If the U.S. dollar falls greatly in value relative to the British pound, and the U.S. dollar rises greatly in value relative to the Japanese yen, what is most likely to happen to the travel expenses of the trips to London and Tokyo for Elizabeth?

The London trip will be more expensive and the Tokyo trip will be less expensive	The London trip will be less expensive and the Tokyo trip will be less expensive	The London trip will be less expensive and the Tokyo trip will be more expensive	The London trip will be more expensive and the Tokyo trip will be more expensive	I don't know

Q29 What is an advantage of a fixed-rate mortgage over a variable-rate mortgage?

Fixed-rate mortgages generally have lower rates than variable-rate mortgages	Fixed-rate mortgages require lower down payments than variable-rate mortgages	Fixed-rate mortgages generally are written for a shorter period of time than variable-rate mortgages	Fixed-rate mortgages have interest rates that stay the same, but variable-rate mortgage interest rates may increase	I don't know

Q30 The most common reason for buying life insurance is to

pay for your funeral.	provide for beneficiaries.	pay off your business debts.	make someone you love rich.	I don't know

Q31 Which investment has tended to have the highest risk and highest rate of return over a long period of time?

Stocks	Saving Bonds	Government bonds	Money Market Mutual Funds	I don't know

Q32 "Olivia just received her credit card statement that contained the following information: Your credit card statement Aug. 26 through Sept. 25, 2019. Minimum payment due: $42.50 Your due date for payment is Oct. 17, 2019. Here is your account summary: (chart image is included with info). How much money must Olivia send to the credit card company, and by what date must it be received so that she can avoid any future finance charges for previous purchases?"

$42.50 by October 17, 2019	$1,687.10 by September 25, 2019	$1,092.65 by October 17, 2019	$1,092.65 by October 25, 2019	I don't know

Q33 Nicholas is shopping for a four-year auto loan to buy a car. To compare loans, the best indicator of the interest rate on the loan is the:

discount rate.	prime interest rate.	federal funds rate	annual percentage rate.	I don't know

Q34 What does a credit bureau do?

extends credit to qualified buyers	provides advice on how to use credit	sends warnings to people in credit trouble	tracks the bill-paying habits of consumers	I don't know

Q35 José has $200 in the bank. He owes $2,000 on a pickup truck worth $4,000. His other personal possessions are worth a total of $3,000, and he has $50 in his wallet. Jose's take home pay is $500 per week. From this information we know that Jose's wealth - or net worth - currently equals

$2,250	$5,250	$5,750	$6,750	I don't know

Q36 If someone tells you today about an investment that had a return that averaged 25 percent per year, how risky is this investment likely to be?

more risky than the average stock	less risky than a savings account	about as risky as the average stock	about as risky as a savings account	I don't know

Q37 Ryan's aunt agrees to co-sign a car loan for him. By doing so, she has agreed to

pay the loan as a gift to Ryan.	pay the loan if Ryan cannot pay.	share the payments equally with Ryan.	make the initial payments until Ryan can make them himself.	I don't know

Q38 I think that finding a good job today is largely a matter of luck.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q39 I think businesses often try to trick young people into spending more than they should

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q40 Fees charged by check-cashing stores are less than fees charged at banks and credit unions for the same services.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q41 I think banks are unsafe places to keep my money.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q42 Credit reports are becoming less and less important in determining who can get a loan from a bank.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q43 When it comes to credit scores, low scores are good.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q44 Credit card companies often entice people into taking on more debt than they can really handle

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q45 People of modest income can become financially well off if they make the right financial decisions.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q46 Investing in stocks and bonds is only for rich people.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q47 The best time for people to start investing is when they are a lot older and earning more money.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q48 Stock prices are up one day and down the next; it is impossible for someone like me to do well.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q49 The stock market is rigged mostly to benefit greedy Wall Street bankers.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q50 It is important for people my age to have health insurance.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q51 I often buy something because many of my friends already have it.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q52 There are times when borrowing money is the smartest thing a person could do.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q53 To be good with his/her money someone needs to be good at math.

Strongly Agree	Agree	Uncertain	Disagree	**Strongly Disagree**

Q54 I know how to manage my expenses.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q55 I have the ability to plan for my financial future.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q56 I will begin to save for my future.

Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree

Q57 Do you currently have a part-time job?

Yes	No

Q58 Do you have a bank account, a debit card, or a mobile payment account in your own name?

Yes	No

Q59 What is your current grade level in school?

9th	10th	11th	12th

Q60 What is your gender?

Male	Female	Prefer not to answer

Q61 How do you describe yourself?

American Indian or Alaska Native	Asian American Black or African American	Black or African American	Hispanic or Latino	Native Hawaiian or other Pacific Islander

Q62 What are your educational plans after high school?

No further education is planned	Attend a 2 year college or junior college	Attend a 4 year college or university	Other plans for training or education	Prefer not to answer

Q63 What is the highest level of schooling your mother, father, (or legal guardian) completed?

Completed high school	Some college	College graduate	Graduate or professional degree	Prefer not to answer

Q64 Which of the following classes have you taken before this class (check ALL that apply)?

An entire semester (or longer) course in personal finance or money management	An entire semester (or longer) course in economics	A portion of a course where at least a week was focused on personal finance or money management	I have not completed any classes in the past where personal finance or money management was taught

Appendix D
Focus Group Guide

Part 1: Welcome and Introduction (15 MIN)

Introductions (5 MIN)

Coordinator: Welcome to the focus group, I'd like everyone to mute their devices and raise their hand if they can hear and see me. My name is Juliann Richardson and I'm with The Financial Literacy Group. Welcome to today's focus group. We look forward to your participation.

Before we began I wanted to provide a few details. First, I wanted to let you know that we will be recording today's session, but the recording will only be used within our firm and our client, to fill in any gaps in our notes. While we may use your comments in our final research report, they will not be attributed to a specific person. By protecting your privacy in this way, we hope that you will speak openly and candidly about today's topic

Second, when you're not speaking please try to keep your microphone muted, but please keep your camera on the entire time.

Before we get into the substance of today's discussion and before I introduce my colleague, are there any questions for me?

Let me introduce my colleague Dan Iannicola who you met at the summer training in downtown Washington. Dan will be moderating today's focus group.

Moderator: Thanks, Juliann, it is good to see everyone again. I'll be leading our discussion today. My role is to direct the content and flow of the discussion and to make sure that we cover the topics of interest. We are not looking for any right or wrong answers, so feel free to offer both positive and negative viewpoints. We want everyone to participate; the opinions and experiences of everyone on this call are important.

Purpose of the Focus Group:

Today's focus group is to help us add some texture to the great data you all have been collecting the last 14 months. The National Jump$tart Coaltion's ongoing mission is to help support students and teachers in the delivery of financial education in the classroom, and through this study you are helping them do that better.

Ground Rules:

Before we begin, let me go over a couple of ground rules.

- We want to keep the discussion informal and relaxed.
- During the discussion, participants should feel free to ask me or each other questions if something is not clear.
- Remember, there are no right or wrong answers.
- If you have opinions or thoughts different from what someone else says, please say so or I'll think that you all agree with what was just said.

- Be careful not to talk all at once; I don't want to miss anything that is said. I know that can be a challenge on a video conference call.
- We would like to hear from everyone. Some people talk more than others, and I'll be encouraging everyone to speak up.
- You do not have to answer any specific questions you do not want to answer.
- The discussion we'll have today is confidential and should not be discussed after you leave the focus group.
- Please turn off your cell phones or put them on vibrate and do your best to keep interruptions to a minimum.
- Does anyone have any questions?

Participant Introduction/Warm-up: (10 MIN)

Let's start today by getting to know each other a bit more. Let's quickly go around the room and please tell us a little about yourself by answering the following three questions.

- Your first name only (Advise them that last names will not be recorded if inadvertently disclosed.)
- Your school and its location.
- What you teach and the type of class you teach financial literacy in

Part 2: FFE Training Concept (15 MIN)

If you recall last summer's training consisted of a two-day training session, a visit to Hill Day (an expo of financial literacy programs/providers) and three on-line modules. Here is the agenda from the two-day training. And the names of the three on-line modules you completed were How to be Financially Smart, Building a Strong Foundation and How to Spend Less than you Earn.

- When you think back on the training what would you say about its value in making you, personally, a better consumer? Did it increase your financial knowledge and skills?
  + And how?
  + How might it have been more impactful in that regard? Topics covered, different approach?
- What impact did it have on you professionally? Did it change how you thought about or taught personal finance concepts in the classroom?
  + And how?
  + How might it have been more impactful in that regard? Topics covered, different approach?
- Show of hands - how many feel it was more valuable personally? Professionally? The same?

Part 3: Professional Development Broadly (10 MIN)

- In general, do you think professional development is needed in financial literacy for you or other teachers?
- If you said, yes, what kind of professional development is most interesting and productive for you? And by "kind" I'm referring to content. I'll list a few examples to get things going, but feel free to add a category:
  + Pedagogy generally (how to teach financial literacy)

    + Pedagogy paired with a particular program (how to teach a particular curricula / program)
    + Issue area knowledge (i.e. what you need to know about credit scores, insurance, taxes, etc.) Teacher focused/student focused?
    + A combination
    + Something else
- What is the best way for you to receive such training?
    + Virtually
    + Books, physical materials and self study
    + Local live session
    + Travel to a two or three day conference
    + Mix
    + Other

Part 4: What Students Need (8 minutes)

- In your experience what is the biggest hurdle to getting through to students on this topic?
- In your experience what is the best method to keep them engaged and learning about personal finance?

Part 5: Client's Questions Through Moderator (or Directly) (12 minutes)

Thank you for the great feedback. Before we close let me ask if there are any questions.

Appendix E
Focus Group Summary: Themes and Quotes

Notes 05/22/20

Attendees:

Teachers: Teachers 1, 2, 3, 4, 5, 6, 7, 8. The time stamp before each quote identifies the time each quote was stated within the focus group recording.

Moderators: Dan Iannicola, Jr., FLG, Juliann Richardson, FLG

Themes of Discussion and Quotes from Teachers

I. Presumption of knowledge for teachers

A. Teacher 1. 33:47 - In the HR fields that I worked in, no one talks about when you first start working for a company about retirement and this is what you get, what you have, but is it really enough for you? And nobody really talks about checking accounts or savings accts, I guess they just think or assume we know it. Just go out there and do it.

B. Teacher 2.

1. 38:10 - One thing they (PD's) don't focus on is the teacher's financial knowledge and I think having that opportunity to take a second and say, 'hey this is what you need to know about your personal financial literacy or standing' was incredibly helpful.

2. 38:40 - A lot of us learned our financial abilities from our parents and the people around us and when you learn from the people around you, you make the same mistakes as the people around you. Having this has been a really great opportunity to bring that knowledge not only into the classroom but also into my personal life.

C. Teacher 3.

1. 39:44 - They taught a lot of information under the assumption that I as a teacher already knew the material in depth and they were teaching us how to teach the material but not: what does it encompass? In other words, there was no background knowledge. They assumed you came in with all of that background knowledge.

2. 40:30 - The knowledge base that I came home from the summer with was huge when I came back to class because I appreciated both sides of it. A lot of the knowledge that I learned over the summer I didn't know personally or I hadn't even thought about personally… I was just getting by or I was just doing the minimum.

3. 41:00 It gave me a lot of empathy for, now I know where my students are coming from when something's thrown at them for which they have no background knowledge of, whatsoever.

4. 41:15 - The workshop over the summer was so informative and useful to me in comparison to some of these professional development training, where they just assume you're coming to the table with a background knowledge base, and we're not.

II. Comments on training

A. Teacher 4. 20:05 - It was nice seeing other ways of teaching some of the concepts and the lessons.

B. Teacher 3.

1. 39:14 - From a personal perspective, I learned more in my weekend of professional development with what we did over the summer than when I took up to 22-24 credits with NGPF when this pandemic first started

2. 45:20 - I appreciated that opportunity and it definitely encouraged me to be more engaged and more involved in my students' learning once I got back to school in the fall.

C. Teacher 5.

1. 42:00 - The training we had over the summer was real world, hands on training, that's what it was. It wasn't scripted.

2. 42:20 - That was truly straight up, real world, because we all could relate to it, in one way or another.

3. 42:34 - The kids themselves want hands-on projects, they want to know how I can relate this to my real world. I think the training that was offered over the summer was pretty cool and I would prefer to be trained that way: real time, real world, hands-on, immediate feedback, collaboration.

D. Teacher 6. 43:50 - The collaboration was great, the energy amongst everyone in the room was really fabulous, I just look forward to that in the future.

III. Reviewed their own financial status or made changes

A. Teacher 7. 29:03 - Professionally for me it has given me a sense of awareness because in my early years I didn't think about retirement, IRA's, any of that. So now, that planning for me, professionally, is preparing me for how to utilize my resources so that I can plan for my future professionally.

B. Teacher 6. 30:25 - Going over the information like you said in a professional way it made me begin to go through my benefits with the county. Instead of just sitting back, you know, you know you have this and that benefit, this pension, life insurance. Maybe I just need to review exactly what I have... because we were talking about people, maybe I have enough, maybe I don't. It forced me to look at myself and what I have instead of just depending on what the benefits office had set up for me.

IV. Enhanced self-efficacy at home and in classroom

   A. Teacher 3.

      1. 10:15 - Coming in the summer and hearing a lot of those speakers, made me feel a lot more confident in what I was teaching, and gave me a little bit more of a secure feeling in what I might not have exactly understood.

      2. 10:42 - I felt it was really beneficial for me personally, even with my own finances, and then, that confidence to take back to my classroom.

   B. Teacher 6.

      1. 11:00 - It cleared up some shaky areas for me, things that I probably glossed over, even in my own personal life, my own financial affairs. It really was very helpful in giving me some clarification. Particularly the areas when we went over insurance and investments, that really helped me a lot.

      2. 11:33 - The banking and the credit, when we went through that, it just strengthened me.

      3. 11:48 - It gave me more confidence when I presented to the students.

   C. Teacher 1. 13:02 - When I started to swerve away from the textbook that I have for my class, I incorporated things that I knew, things that I learned in my financial literacy financial world and when I presented it to my students they were excited.

   D. Teacher 2. 15:25 - The materials shared and the information was especially helpful in not just furthering my knowledge but it allowed me to bring a new level of confidence into the classroom and start to have conversations with students and generally with other people.

V. Real time, real world applicability

   A. Teacher 8. 22:02 - I want to be able to take these topics and put them into play so, when I go back to the classroom it's not just giving them you know a definition, it's here's an example, or here's a worksheet, on how we're going to work together and how it would work in real life and that's how the kids will remember it better and it's easier to teach it that way and takes the pressure off the teacher and I can work around the crowd and try to make sure they all understand it.

   B. Teacher 3. 24:40 - It's been very beneficial to take a concept and make it real.

   C. Teacher 6.

      1. 31:38 - I teach a lot of entrepreneurship and I think that it's important for the students to know about and definitely I use financial literacy and incorporate it into entrepreneurship because I try to get the students to look at not only getting the ideas for starting a business but the financial side of it: What the costs are, what the expenses are going to be, start up costs, budgeting.

2. 32:23 - No matter what business course I'm teaching, I always incorporate financial literacy, I always find a way to incorporate it.

VI. It would have been good to have materials to take back to the classroom on pedagogy

A. Teacher 2. 16:14 - We have all this great information but how do you develop the executive functioning skills that get students to practice what we're preaching. More of an opportunity to develop the self regulation that I think is necessary for effective money management.

VII. FINLIT is very fluid, need to stay up to date

A. Teacher 8.

1. 17:15 - There's a lot of little things that constantly change in the field so… I've got the content, I pick up on the new things as I go to different seminars and things of that nature but now professional development is important.

2. 17:35 - How do you take the topic, make it real life for the kid instead of, ok here's a note, memorize it, don't forget it and it's got to play out in his life.

B. Teacher 3. 52:20 - The only thing that is difficult is things do change over time so what you prepare for a financial lesson, the following year you know, rates change, policies change, laws change. So, I've even become a little more savvy on trying to keep up with that personally which helps me professionally as well.

VIII. Pandemic comments or shortened and blended school comments

A. Teacher 7.

1. 14:33 - In addition to the consumer protection portion of, how our ID and everything that goes on. Especially now in the midst of the pandemic, and with all of the scams that are happening, and also what I share with my students, in regard to the pandemic, we're using enrichment exercises.

2. 29:30 - What's happening currently with the pandemic, with the stock market going down, up, around, bull/bear market, it's all around. So professionally when I hear those terms, I get it. I knew a little bit about it prior to the session but I believe it has really given me a stronger point where I know what I need to do as a teacher and being at home as well and sharing some of the knowledge that I know.

Appendix F
Follow On, Semi-Structured Individual Teacher Interviews

(Conducted via telephone February 12-17, 2021)

A year after completing their last survey for the study and administering their last test to students, four teachers from the study were interviewed for their views on three topics. The three topics areas were: what has the intervening year revealed to you about the impact the professional development had on your personal financial behavior how your teaching of personal finance has changed and the challenges of teaching personal finance via distance learning modalities.

Teacher A

- **Profile:** A male teacher with less than 5 years of experience, teaching in Virginia at a public high school. He has taught Economics and Personal Finance classes.
- **Personal Finance Impact:** This teacher was significantly impacted by the J$FFE professional development program. He said he learned a number of things and noted that being around the presenters and the other teachers motivated him to finally take some financial steps he has long known needed to be taken. Specifically, when reflecting on the J$ training he said, "I took away more of an understanding and motivation to figure out my own personal finances. After the training, I had a new mental outlook: I can change my personal financial standing." He said as he looks back a year later that sense of financial empowerment has stayed with him.
    - Additionally, he said he made specific moves to improve both his financial present and his financial future. He talked about the J$FFE sessions run by the Fidelity representative and said proudly "I ended up maxing out my employee contributions to my retirement plan." He discussed the professional development lesson on credit score hosted by the Experian representative and how he learned a lot. He said, "I was also able to consolidate all my credit card debt, I no longer carry a balance and my credit score has gone up 150-200 points over the past year." Finally, he said "I also set up a summer fund for my second year of teaching," referencing a saving tool used by some teachers who are not paid year-round.
- **Classroom Impact:** Within his classroom, he observed that the J$FFE program inspired him to emphasize the practical and the personal in teaching about money. Specifically, he noted that he has enhanced his delivery method and said, "I'm able to integrate my own personal experiences in my class and make it more real for the students."
    - He also considers his class much more important than just a finance class for his ELL students, saying "My class is really a culture class; a how-to-survive-and-thrive-in-the-American-economy class." Overall he said he believed his personal finance lessons "had a disproportinate impact with students of color." He noted that "the school I teach in has a very large wealth gap, and students who come from less privileged backgrounds..." and that, after the J$FFE program, he felt more confident to customize lessons to meet their needs. He said, "I feel that the vast majority of educational materials

available target middle-class, white communities and don't take into account the needs of immigrant communities or communities of color."

- **Challenges/Consequences of Distance Learning:** When talking about the virtual environment he said, “My students are calling into class from work because their family needs the money. No one has their cameras on, so they could be anywhere. If they need to work, they are working.” About student performance under the distance learning model he stated, “The students with parents at home are thriving, and the students that need more support have suffered.” To help his struggling students he says he has “learned to interact with different online tools and use differentiation tactics to engage with the non-engaged students.”

Teacher B

Profile: A Female teacher with 20+ years of experience. She teaches in Maryland at a public high school, currently teaching National Academy Foundation Financial Management courses.

Personal Finance Impact: This teacher spoke highly of the J$FFE training “I remember well… it was the best professional development I've ever had, especially in my area of business.” She also enjoyed the fact that this was a teacher-focused training, “It was the first PD that was directed at us to help reinforce our own knowledge.” Some of the highlights for her were, “I was shaky in insurance and hearing the discussion of fellow teachers and presenters, that gave me the confidence to look into two types of insurance, disability and term, and I did eventually purchase two insurances, beyond what my employer has for me.” On her overall thoughts on the training she said, “Accounting and personal finance is all wrapped together, the (J$FFE) training pulled something out of me to go make some moves.”

Classroom Impact: In the classroom she made one major change to her class syllabus, “I did feel more confident introducing certain topics. I started a unit on insurance.”

She described some of the challenges of her student population. She said "many of the students did not have their own debit card which I thought was something pretty common nowadays." Some of the students she noted, "didn't know if they had their own bank accounts set up for them by their parents."

Challenges/Consequences of Distance Learning: On talking about which students may be suffering more than others, she stated “ELL students are hard to work with remotely. In a normal classroom, I would break them into small groups with a bilingual student to help them. I can't do that in the virtual environment.” On the current level of virtual student interest in her personal finance lessons, she said “The students are not involved as they should be; there is a serious lack of engagement across the board.” Speaking on ways she has changed her teaching virtually she said, “I use several websites to enhance teaching this year, and videos as well. It's something tangible that I can give them [students] and they can look back on later.”

Teacher C

Profile: A female teacher with 16-20 years of experience. She is teaching in Maryland at a public high school and currently teaching College Career Research and Development classes.

Personal Finance Impact: She praised the training because she thought helping teachers focus on their own finances is the doorway to getting them to embrace teaching personal finance to others. Specifically, she stated, “I can't teach you what I don't know or haven't experienced." And "financial literacy is a foundation for everyone's future, anyone's success in life." In particular, she thought the pandemic showed to students the need for this type of instruction. She said, "Learning financial literacy is about preparing for those times that you don't think of, but that do happen." When reflecting on the J$FFE training she shared, "The training has enhanced my personal life, I have to share this with the world, to my students and my family. My family is closer because of it. We [her family] are all doing a 5-year debt free challenge; we are following stocks and purchasing together to watch them grow; I opened an account for my granddaughter."

Classroom Impact: She reflected on the training impact in her classroom and how it added to her strong belief in how essential this topic is. "If I can teach and you can see the passion on my face, it helps." Also, comparing what she learned in the PD to the resources at her school she found that "The textbooks don't have enough."" She shared to pique curiosity in her classes "I tell my students; I have information that even your parents might not know. You may have to teach them yourselves. That statement gets them interested." She discussed how the PD was consistent with her pragmatic, hands on approach to getting through to students. She revealed, "I ask the class, how many of you are moving out of your parents' house at 18?" She paused and said in a humorous, but authoritative voice she uses in the classroom, "Put your hand down!! Save your money!"

Challenges/Consequences of Distance Learning: When talking about the virtual environment she mentioned that "One requirement in our class is to get a job, but within this new environment it's hard. Some students found jobs and worked and then got COVID… their recovery was hard." Also she noted the enthusiasm level was significantly less than she was used to with in-person learning, she observed, "The students don't seem to be as engaged, especially my juniors, which I haven't met in person. They aren't required to be on camera. And I have no clue if they are engaged or what they are doing." In one instance she stated she has a few students that have decided to mostly stop attending school, "Some students who have jobs have turned off school, and only show up a few days a week." On improving engagement, she stated "I try to make lessons exciting and engaging but the intrinsic motivation just isn't there, or it seems to be disappearing as the year wears on." She lamented that despite what she learned in the PD and her own belief in the subject, "I can't motivate a person to get interested in their own future." She thought a small improvement might be if she could tell students to stay visible. She noted "If there was a requirement to have your camera on, it would be easier to evaluate my own effectiveness and student engagement."

Teacher D

Profile: A female teacher, 6-10 years of experience, teaching in Washington D.C. public high school. She currently teaches Intro to Engineering Design, Honors Tech and Civil Engineering, Honors Principles of Engineering classes.

Personal Finance Impact: While talking about the impact of the J$FFE training, she stated that having a few days to just focus on her own finances in the company of experts and other teachers was transformative. She said it increased her financial self-awareness. For example, she revealed that "I stopped making impulse purchases. I'm working on my credit card debt reduction and have a plan to increase my investing in the next two years." When speaking about the impact of the pandemic on her personal life she said, "In our family we are all helping each other. Our money is now in a group budget type of situation." She went on "We pitch in to help another family member in need." Another impact she spoke about was food insecurity, "My students and some members of my family both lean on the food distribution sites, we have that experience in common."

Classroom Impact: With regards to her classroom, she stated, "I include a budget requirement for my projects now.

I have my students think about labor, insurance, marketing, and materials costs, also personnel hiring.” On the topic of improving her curriculum, she said “I use the textbooks but enhance my teaching with websites and supporting videos.” In regard to her ELL and struggling students she reflected that “I’d like to continue using the self-paced online learning tools in the classroom to improve student engagement.”

She discussed the challenges her particular students were up against.

"Given that I teach at a Title I school, the disparities (e.g., wealth, economics, digital divide, resources, budgetary, funding, grants, and similar) are apparent."

She mentioned the value of the J$FFE professional development program because it better equipped her to translate her personal financial experience into something useful for her students in a classroom context. Specifically she said, "I am confident, though, that the personal finance content coupled with examples of my own financial experiences are both equitable and quality in context. With this guidance, many of my students are on the path to becoming financially proficient."

Challenges/Consequences of Distance Learning: One success story she shared about the virtual environment was that the “Virtual field trips with take-home kits from the school have been a great resource this year.” When reflecting on the challenges of the year, she said “The students don’t have to show their faces, and some choose not to engage. Some do the work; others say they are tired or are silent.” To improve participation, she stated “I use grading rubrics and student-lead grading to improve engagement.” She relies on interactive online quizzes and videos as well. One way she reaches her ELL students is “I take a lot of one-on-one conference calls with my ELL students to keep them engaged and on time with their work.”

Appendix G

J$FFE Teacher Training Agenda

JUMP$TART! Financial Foundations for Educators®

BUILDING KNOWLEDGE & CONFIDENCE IN PERSONAL FINANCE

Financial Foundations for Educators
June 24 - June 26, 2019

Schedule

June 24th

8:15 AM	Registration, breakfast
9:00 AM	Welcome
9:30 AM	Session 1: Risk Management *Presented by Gail Tulipani, Fidelity Investments*
10:30 AM	Break
10:45 AM	Session 1: Risk Management and Insurance (cont.)
12:00 PM	Luncheon *Remarks by Laura Levine, President and CEO, JumpStart*
1:00 PM	Session 2: Enhancing Your Earning Capacity *Presented by Peggy Muldoon, NEFE*
2:15 PM	Break
2:30 PM	Session 2: Enhancing Your Earning Capacity (cont.)
4:30 PM	Conclusion

June 25th

8:15 AM	Registration, breakfast
9:00 AM	Session 3: Investing *Presented by Gail Tulipani, Fidelity Investments*
10:15 AM	Break
10:30 AM	Session 3: Investing (cont.)
11:30 AM	Luncheon
12:30 PM	Session 4: Manage Credit and Debt *Presented by Rod Griffin, Experian*
2:30 PM	Break
2:45 PM	Session 5: Financial Services, Identity Fraud *Presented by Leslie Jones, CFPB*
4:30 PM	Conclusion and Announcements

June 26th

12:00 PM	Resource Review Luncheon on Capitol Hill Rayburn House of Representatives, Rooms 2043-2045
3:00 PM	Conclusion

Appendix H
Hill Day flyer

Hill Day

jumpstart.org/hillday19

#FLHD19

Open to the Public
Free Buffet Lunch

Financial Literacy
HILL DAY

June 26 | noon to 3 p.m. | Rayburn 2043-45

Financial LIteracy Day on Capitol Hill introduces government officials and the general public to strides the Jump$tart Coalition and its partners are making in the financial literacy effort.

More than 50 financial literacy exhibitors

Honorary Co-Hosts

U.S. Rep Joyce Beatty
(D-Ohio-3)

U.S. Rep Steve Stivers
(R-Ohio-15)

Sponsors

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JUMP$TART! FINANCIAL SMARTS FOR STUDENTS

Appendix I
Teacher Data Analysis Outline

Financial Knowledge Score - Summary Statistics

Table 1 shows the average financial knowledge scores (Q39-Q44) broken down by semester and demographic factors. Due to low number of teachers, the interpretation of differences in scores across semesters may be limited.

Table 1. Average Financial Knowledge Scores by Semester

	Spring		Fall		Comparison	
	N	Mean Score	N	Mean Score	Δ	% Δ
All	10	4.1	10	4.4	0.3	7%
Gender						
Male	2	6.0	2	5.5	-0.5	-8%
Female	8	3.6	8	4.1	0.5	14%
School Setting						
Public	9	3.9	9	4.2	0.3	9%
Private	1	6.0	1	6.0	0.0	0%
Highest Degree						
Associate	1	2.0	1	1.0	-1.0	-50%
Bachelor's +	1	4.0	1	5.0	1.0	25%
Master's	4	4.3	3	3.7	-0.6	-14%
Master's+	4	4.5	5	5.4	0.9	20%
School Location						
DC	1	4.0	2	3.5	-0.5	-13%
Maryland	5	4.0	4	4.5	0.5	13%
Virginia	4	4.3	4	4.8	0.5	12%
Year of Teaching Experience						
Less than 10 years	4	4.0	4	5.0	1.0	25%
More than 10 years	6	4.2	6	4.0	-0.2	-4%
Confidence Score Percentile						
<50 Percentile Confidence Score	6	3.7	6	3.8	0.2	5%
>50 Percentile Confidence Score	4	4.8	4	5.3	0.5	11%
Teachers: Improved Ability in Teaching PF						
No/Unsure	7	4.4	7	4.9	0.4	10%
Yes	3	3.3	3	3.3	0.0	0%
Teachers: Improved Ability in Managing Own PF						
No/Unsure	8	4.3	8	4.8	0.5	12%
Yes	2	3.5	2	3.0	-0.5	-14%
Teachers: Improved Ability in Handling Unexpected Expense						
No	8	4.4	8	4.6	0.3	6%
Yes	2	3.0	2	3.5	0.5	17%

	Spring		Fall		Comparison	
	N	Mean Score	N	Mean Score	Δ	% Δ
Teachers: Improved Confidence in Securing Financial Future						
No	9	4.3	9	4.8	0.4	10%
Yes	1	2.0	1	1.0	-1.0	-50%
Teachers: Improvement in Enjoying Life Due to Way in Managing Money						
No	9	4.3	9	4.8	0.4	10%
Yes	1	2.0	1	1.0	-1.0	-50%
Teachers: Improvement in Not Letting Finance Control Life						
No	5	4.2	5	4.6	0.4	10%
Yes	5	4.0	5	4.2	0.2	5%
Teachers: Improved Ability to Come up with $2,000 for Emergency						
No	9	4.1	9	4.2	0.1	3%
Yes	1	4.0	1	6.0	2.0	50%

Financial Knowledge Score - T-tests

The similar t-test was computed for the teacher financial knowledge scores. Because there are no pre- and post-education tests for teachers within each semester, a paired t-test was conducted to determine whether the difference in mean knowledge scores is statistically significant pre- and post-J$FFE training across semesters. A paired t-test studies subjects at two different time-period (Fall and Spring in this case). The resulting t-value is 0.61 with a p-value of .55 at 13 degrees of freedom. We cannot conclude the difference in mean knowledge scores is statistically significant.

Knowledge Score Paired T-test

		Mean	StdDev	t	p	DF
Spring (n=285)	Fall Score	4.50	1.56	0.61	0.55	13
	Spring Score	4.29	1.38			

Financial Well-Being Score (FWB) - Summary Statistics

Table 2 shows the average financial well-being scores (Q.19-Q.28) broken down by semester and demographic factors.

Table 2. Average Financial Well-Being Scores by Semester

	Spring		Fall		Comparison	
	N	Mean Score	N	Mean Score	Δ	% Δ
All	10	60.9	10	58.9	-2.0	-3.3%
Gender						
Male	2	72.0	2	63.5	-8.5	-11.8%
Female	8	58.1	8	57.8	-0.4	-0.6%
School Setting						
Public	9	57.6	9	55.3	-2.2	-3.9%
Private	1	91.0	1	91.0	0.0	0.0%
Highest Degree						
Associate	1	60.0	1	59.0	-1.0	-1.7%
Bachelor's +	2	52.5	1	65.0	12.5	23.8%
Master's	4	49.8	3	51.7	1.9	3.9%
Master's+	6	72.7	5	62.0	-10.7	-14.7%
School Location						
DC	1	40.0	2	57.0	17.0	42.5%
Maryland	5	69.0	4	69.0	0.0	0.0%
Virginia	4	56.0	4	49.8	-6.3	-11.2%
Year of Teaching Experience						
Less than 10 years	4	51.5	4	51.3	-0.3	-0.5%
More than 10 years	6	67.2	6	64.0	-3.2	-4.7%
Confidence Score Percentile						
<50 Percentile Confidence Score	6	52.3	6	50.8	-1.5	-2.9%
>50 Percentile Confidence Score	4	73.8	4	71.0	-2.8	-3.7%
Teachers: Improved Ability in Teaching PF						
No/Unsure	7	64.0	7	63.6	-0.4	-1%
Yes	3	53.7	3	48.0	-5.7	-11%
Teachers: Improved Ability in Managing Own PF						
No/Unsure	8	60.1	8	58.3	-1.9	-3%
Yes	2	64.0	2	61.5	-2.5	-4%
Teachers: Improved Ability in Handling Unexpected Expense						
No	8	63.6	8	59.4	-4.3	-7%
Yes	2	50.0	2	57.0	7.0	14%
Teachers: Improved Confidence in Securing Financial Future						
No	9	61.0	9	58.9	-2.1	-3%
Yes	1	60.0	1	59.0	-1.0	-2%
Teachers: Improvement in Enjoying Life Due to Way in Managing Money						
No	9	61.0	9	58.9	-2.1	-3%

	Spring		Fall		Comparison	
	N	Mean Score	N	Mean Score	Δ	% Δ
Yes	1	60.0	1	59.0	-1.0	-2%
Teachers: Improvement in Not Letting Finance Control Life						
No	5	64.8	5	66.8	2.0	3%
Yes	5	57.0	5	51.0	-6.0	-11%
Teachers: Improved Ability to Come up with $2,000 for Emergency						
No	9	63.2	9	59.3	-3.9	-6%
Yes	1	40.0	1	55.0	15.0	38%

Financial Well-Being Score - T-tests

The same paired t-test was conducted for financial well-being scores to determine whether the difference in mean scores from J$FFE-training is statistical significance. The resulting t-value of 0.82 and a p-value of 0.22 at 9 degrees of freedom means we cannot conclude that the difference is statistically significant.

FWB Score Paired T-Test

	Mean	StdDev	t	p	DF
Fall Score	4.40	1.71	0.82	0.22	9
Spring Score	4.10	1.45			

FINRA Score Comparison

Table 3 looks at the percentage of correct responses from the FINRA survey and the Jump$tart survey.

Table 3. Percentage of Correct Response Comparison from the FINRA and Jump$tart Survey

J$ Q#	FINRA National	FINRA Mid Atlantic	J$-Total (Spring)	J$-Total (Fall)	J$ Δ (Fall-Spring)	Δ (J$ Fall - Mid Atlantic)	Δ (J$ Fall - National)
39	72.5%	70.4%	90.0%	90.0%	0.0%	19.6%	17.5%
40	55.1%	54.5%	70.0%	80.0%	10.0%	25.5%	24.9%
41	26.2%	30.0%	50.0%	40.0%	-10.0%	10.0%	13.8%
42	73.0%	69.5%	90.0%	80.0%	-10.0%	10.5%	7.0%
43	43.4%	42.2%	70.0%	80.0%	10.0%	37.8%	36.6%
44	30.2%	28.7%	40.0%	70.0%	30.0%	41.3%	39.8%

Confidence Score Tabulation

Table 4 shows the tabulation of confidence questions (Q17-Q29) asked in the survey with calculations of change in average score between the Spring and Fall semesters.

Table 4. Tabulation of Confidence Questions

Q#		N	Score Δ	Score % Δ
17	I feel confident in the knowledge base I have to teach personal finance to students.	10	0.3	7.1%
18	I feel confident in my ability to manage my own personal finances.	10	0.0	0.0%
19	I can handle a major unexpected expense.	10	0.0	0.0%
20	I am securing my financial future.	10	0.4	10.8%
21	Because of my money situation, I feel like I will never have the things I want in life.	10	0.5	14.7%
22	I can enjoy life because of the way I'm managing my money.	10	0.4	11.4%
23	I am concerned that the money I have or the money I will save will not last.	10	0.1	3.2%
24	I am just getting by financially.	10	0.1	3.4%
25	Giving a gift for a wedding, birthday or other occasion would put a strain on my finances for the month.	10	-0.1	-2.7%
26	I have money left at the end of the month.	10	0.0	0.0%
27	I am behind with my finances.	10	0.0	0.0%
28	My finances control my life.	10	0.3	9.1%
29	How confident are you that you could come up with $2,000 if an unexpected need arose within the next month?	10	0.2	5.1%

Behavior Score Tabulation

Table 5 shows the percentage of teachers who answered "Yes" to behavioral questions 31-38 on the survey by semester. It also shows the difference in percentage between the semesters and the percentage change.

Q#		N	% Answered "Yes" - Spring	% Answered "Yes" - Fall	Δ	Score % Δ
31	Have you set aside emergency funds that would cover your expense for 3 months?	10	28.6%	50.0%	21.4%	75.0%
32	I put money into a retirement account with every paycheck.	10	64.3%	71.4%	7.1%	11.1%
33	In the past 6 months, I have reviewed my credit report.	10	50.0%	42.9%	-7.1%	-14.3%
34	I know what my current credit score is.	10	64.3%	71.4%	7.1%	11.1%
35	I or someone on my behalf has drafted and recorded my last will and testament.	10	14.3%	7.1%	-7.1%	-50.0%
36	I periodically review my retirement account allocations?	10	57.1%	50.0%	-7.1%	-12.5%
37	Have you ever used the services of a financial planner or adviser?	10	28.6%	21.4%	-7.1%	-25.0%
38	If yes to Q#37, do you know how he/she was compensated?	10	14.3%	7.1%	-7.1%	-50.0%

Appendix J

Student Attitude/Behavior

Table 1. Financial Knowledge Score

	Spring				Fall					% Change of Deltas
	Post N	Post Mean Score	Mean Score Δ	% Δ1	Post N	Post Mean Score	Mean Score Δ	% Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
All	285	15.6	1.2	8%	272	16.1	3.1	24%	1.9	186%
Grade Level										
Freshmen	25	10.7	1.0	10%	5	22.2	11.9	115%	10.9	1027%
Sophomore	91	17.4	1.9	12%	57	18.0	4.2	30%	2.3	149%
Junior	94	15.9	0.6	4%	97	15.3	2.9	24%	2.3	516%
Senior	75	14.6	1.1	8%	113	15.6	2.3	17%	1.1	100%
Gender										
Male	168	16.4	1.6	11%	160	17.4	3.8	28%	2.2	154%
Female	110	14.6	1.0	8%	108	14.2	2.0	17%	1.0	116%
Prefer Not to Answer	7	10.1	-7.1	-41%	4	17.3	2.7	18%	9.7	144%
Race/Ethnicity										
American Indian/ Alaska Native	3	8.0	-5.0	-38%	3	20.0	6.7	50%	11.7	230%
Asian	15	15.3	-0.4	-2%	22	17.3	2.0	13%	2.3	631%
Affrican American	103	13.3	0.7	5%	92	14.1	2.5	21%	1.8	295%
Hispanic	80	15.1	1.9	14%	59	13.8	2.7	25%	0.9	75%
White	59	21.5	2.6	13%	76	21.1	4.7	29%	2.2	115%
Other / Prefer Not to Answer	21	13.5	-0.7	-5%	18	13.0	0.8	7%	1.5	240%
Parents/Guardian Highest Education										
High School	48	14.7	-0.4	-2%	46	15.4	2.2	17%	2.6	822%
College Educated	196	15.9	1.5	10%	187	16.1	3.0	23%	1.5	115%
Prefer Not to Answer	41	14.7	1.5	12%	39	17.0	4.6	37%	3.0	214%
Previous Financial Education										
Portion of a Course/None	199	15.7	1.4	10%	192	16.2	3.1	24%	1.7	141%
Semester on PF/ MM/Economics	86	15.3	0.6	4%	80	15.8	3.1	24%	2.5	455%
Has Part-time Job										
Yes	119	16.2	1.0	6%	104	16.6	2.8	20%	1.8	213%
No	166	15.1	1.1	8%	168	15.8	3.1	25%	2.0	203%
Has Bank Account, Credit Card, or Debit Card in Own Name										
Yes	175	16.2	1.6	11%	167	16.7	3.2	23%	1.6	115%
No	110	14.5	0.6	4%	105	15.1	3.2	26%	2.6	567%

	Spring				Fall					% Change of Deltas
	Post N	Post Mean Score	Mean Score Δ	% Δ1	Post N	Post Mean Score	Mean Score Δ	% Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Plans to Attend 4year College After High School										
No	206	16.1	2.0	14%	206	16.4	3.0	22%	1.0	58%
Yes	59	14.0	-2.0	-12%	46	15.8	3.7	31%	5.7	350%
Prefer Not to Answer	20	14.6	0.6	4%	20	14.1	3.4	32%	2.8	654%
Course Type										
Single Semester	128	16.7	2.4	16%	103	19.0	4.4	30%	2.1	83%
Year-long	157	14.7	0.2	2%	169	14.3	2.3	19%	2.0	1052%

Key for above table (Spring and Fall)

Post N	Post Mean Score	Mean Score Δ	% Δ1 % Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Number of Students at end of Semester	Average score of students on second test	Difference in Average score of students between tests per semester	Change in percentage of students scores in Spring (1) and Fall Semester (2)	Difference between change in % in each semester	The delta of the deltas expressed in percentage. Or the lift in test scores from Spring to Fall for students.

Table 2. Financial Knowledge Score

	Spring				Fall					% Change of the Deltas
	Post N	Post Mean Score	Mean Score Δ	% Δ1	Post N	Post Mean Score	Mean Score Δ	% Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Teachers' Years of Teaching Experience										
Less than 10 years	116	16.0	0.3	2%	109	15.5	3.0	24%	2.7	987%
10 years or More	169	15.3	1.8	13%	163	16.5	3.1	23%	1.4	79%
Did the Teacher Have Improved Confidence in Securing Financial Future?										
No (No Change)	250	16.3	1.4	9%	263	16.4	3.2	24%	1.8	159%
Yes	35	10.1	-0.2	-2%	9	6.9	0.6	9%	0.7	623%
Did the Teacher Have Improved Ability in Managing Own Personal Finance?										
No (No Change)	224	16.1	1.1	8%	195	17.0	3.5	26%	2.4	245%
Yes	61	13.4	1.3	11%	77	14.0	1.9	16%	0.6	44%
Did the Teacher Have Improved Ability in Managing Unexpected Expense?										
No (No Change)	234	16.9	1.4	9%	247	16.9	3.3	25%	1.9	164%
Yes	51	9.4	0.0	0%	25	8.0	0.5	7%	0.5	3223%
Did the Teacher Have an Improvement in Enjoying Life Due to Way in Managing Money?										
No (No Change)	250	16.3	1.4	9%	263	16.4	3.2	24%	1.8	159%
Yes	35	10.1	-0.2	-2%	9	6.9	0.6	9%	0.7	623%
Did the Teacher Have Improvement in Not Letting Finance Control Life?										
No (No Change)	153	15.5	1.3	9%	194	17.0	3.6	27%	2.3	199%
Yes	132	15.6	1.1	8%	78	14.0	1.9	16%	0.8	106%
Did the Teacher Have Improved Ability to Come up with $2,000 for an Emergency?										
No (No Change)	269	16.0	1.2	8%	256	16.6	3.2	24%	2.0	192%
Yes	16	7.9	0.4	6%	16	8.6	0.5	6%	0.1	5%

Key for above table: (Spring and Fall)

Post N	Post Mean Score	Mean Score Δ	% Δ1 % Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Number of Students at end of Semester	Average score of students on second test	Difference in Average score of students between tests per semester	Change in percentage of students scores in Spring (1) and Fall Semester (2)	Difference between change in % in each semester	The delta of the deltas expressed in percentage. Or the lift in test scores from Spring to Fall for students.

Table 3. Financial Attitude Score

	Spring				Fall					% Change of the Deltas
	Post N	Post Score	Mean Score Δ	% Δ1	Post N	Post Score	Mean Score Δ	% Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
All	285	10.0	0.1	1%	272	11.0	1.4	15%	1.3	1427%
Grade Level										
Freshmen	25	8.0	-1.7	-17%	5	12.4	2.6	26%	4.3	250%
Sophomore	91	10.5	0.2	2%	57	11.4	1.5	15%	1.3	627%
Junior	94	10.4	0.2	2%	97	10.7	1.3	14%	1.1	654%
Senior	75	9.8	0.4	5%	113	10.9	1.4	14%	0.9	197%
Gender										
Male	168	10.4	0.3	3%	160	11.3	1.3	13%	1.0	307%
Female	110	9.7	0.1	1%	108	10.5	1.4	16%	1.4	2208%
Prefer Not to Answer	7	6.3	-5.3	-46%	4	12.5	2.7	28%	8.0	160%
Race/Ethnicity										
American Indian/ Alaska Native	3	8.0	-0.5	-6%	3	14.7	5.3	57%	5.8	1071%
Asian	15	9.5	-1.1	-10%	22	10.6	1.1	11%	2.2	207%
Affrican American	103	9.2	-0.2	-3%	92	10.5	1.4	15%	1.6	666%
Hispanic	80	10.0	0.6	6%	59	10.2	1.4	16%	0.8	149%
White	59	12.2	0.4	3%	76	12.6	1.7	16%	1.4	382%
Other / Prefer Not to Answer	21	9.1	-0.3	-3%	18	10.2	0.8	8%	1.1	339%
Parents/Guardian Highest Education										
High School	48	9.7	-0.9	-8%	46	10.7	1.1	12%	2.0	247%
College Educated	196	10.1	0.2	2%	187	10.9	1.3	14%	1.2	606%
Prefer Not to Answer	41	10.4	0.7	8%	39	11.4	1.9	20%	1.2	158%
Previous Financial Education										
Portion of a Course / None	199	9.8	0.1	1%	192	11.1	1.6	17%	1.5	1896%
A Semester on PF/ MM/Economics	86	10.6	0.1	1%	80	10.6	0.7	7%	0.6	923%
Have Part-time Job										
Yes	119	10.3	0.1	1%	104	11.2	1.0	10%	0.9	698%
No	166	9.9	0.0	0%	168	10.8	1.5	17%	1.5	6533%
Have Bank Account, Credit Card, or Debit Card in Own Name										
Yes	175	10.4	0.2	2%	167	11.1	1.2	12%	0.9	407%
No	110	9.5	-0.1	-1%	105	10.8	1.9	21%	2.0	1706%
Plans to Attend 4year College After High School										
No	206	10.2	0.4	4%	206	11.0	1.3	13%	0.9	261%
Yes	59	9.7	-0.8	-8%	46	10.8	2.0	22%	2.8	385%
Preferred Not to Answer	20	9.0	-0.6	-6%	20	11.4	0.8	8%	1.4	233%

	Spring				Fall					% Change of the Deltas
	Post N	Post Score	Mean Score Δ	% Δ1	Post N	Post Score	Mean Score Δ	% Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Course Type										
Single Semester	128	10.5	0.9	9%	103	12.4	2.3	23%	1.5	159%
Year-long	157	9.6	-0.5	-5%	169	10.1	0.8	9%	1.4	272%
Teachers: Year of Teaching Experience										
Less than 10 years	116	10.1	-0.8	-7%	109	11.0	1.4	15%	2.3	307%
10 years or more	169	10.0	0.7	8%	163	11.0	1.4	14%	0.6	85%
Did the Teacher Have Improved Confidence in Securing Financial Future?										
No (No Change)	250	10.4	0.2	2%	263	11.2	1.5	16%	1.4	828%
Yes	35	7.6	-0.5	-6%	9	5.2	-2.9	-36%	-2.4	-491%
Did the Teacher Have Improved Ability in Managing Own Personal Finance?										
No (No Change)	224	10.2	-0.1	-1%	195	11.2	1.4	15%	1.6	1272%
Yes	61	9.5	0.9	11%	77	10.3	1.3	14%	0.4	32%
Did the Teacher Have Improved Ability in Managing Unexpected Expense?										
No (No Change)	234	10.7	0.4	4%	247	11.4	1.7	17%	1.2	303%
Yes	51	7.2	-1.5	-17%	25	6.6	-1.5	-19%	0.0	-10%
Did the Teacher Have an Improvement in Enjoying Life Due to Way in Managing Money?										
No (No Change)	250	10.4	0.2	2%	263	11.2	1.5	16%	1.4	828%
Yes	35	7.6	-0.5	-6%	9	5.2	-2.9	-36%	-2.4	-491%
Did the Teacher Have Improvement in Not Letting Finance Control Life?										
No (No Change)	153	10.1	0.1	1%	194	11.4	1.6	16%	1.5	1557%
Yes	132	10.0	0.1	1%	78	9.8	0.9	10%	0.8	974%
Did the Teacher Have Improved Ability to Come up with $2,000 for an Emergency?										
No (No Change)	269	10.3	0.3	3%	256	11.2	1.5	16%	1.2	391%
Yes	16	6.4	-3.7	-36%	16	7.3	-0.8	-9%	2.9	74%

Key for above table: (Spring and Fall)

Post N	Post Mean Score	Mean Score Δ	% Δ1 % Δ2	Δ2- Δ1	% (%Δ2- %Δ1) / %Δ1
Number of Students at end of Semester	Average score of students on second test	Difference in Average score of students between tests per semester	Change in percentage of students scores in Spring (1) and Fall Semester (2)	Difference between change in % in each semester	The delta of the deltas expressed in percentage. Or the lift in test scores from Spring to Fall for students.