# How Confident are Potential Personal Finance Teachers?\*

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#### **Abstract**

In the past decade, over twice as many states have required personal finance instruction in high schools. Even localities within non-mandating states are increasingly requiring students to take personal finance courses. Accordingly, non-profit organizations and regional universities have increasingly offered professional development opportunities for potential personal finance teachers. Yet, current literature shadows these updates. In this study, we use self-collected survey data to examine current standings in teacher confidence, training take up, and dispositions toward personal finance requirements. Since 2009, we find that confidence in personal finance has increased from 46% to 95% and dispositions strongly favoring personal finance requirements increased from 46% to 70%. Additionally, we find that teachers with licensure outside of business or economics were more likely to take up professional development in personal finance instruction. These findings suggest that policymakers can be assured that instructors are prepared to teach personal finance, time and low-cost, easily accessible professional development opportunities permitting.

JEL Codes: G53, I21, D83

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development

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### 1 Introduction

States and localities are increasingly requiring students to receive personal finance instruction to graduate high school. Since 2009, over twice as many states have instituted these requirements. However, jurisdictions variously implement and administer personal finance instruction. One difference of long-standing concern is the extent to which jurisdictions require teacher training, licensure, and preparation to be completed, or at least to be offered in concert with mandates. A few states have established—or are establishing—teacher training programs for personal finance instruction. Utah State Board of Education, for example, provides teacher training as part of its funded mandate (Utah State Board of Education, 2019). At least three states (Tennessee, West Virginia, and Illinois) offer professional development for personal finance instruction to teachers at low- or no cost, often through partnerships between state treasuries, departments of education, and/or state councils on economic education (Pelletier, 2017). Theoretically, such training facilitates instructors' confidence in and ability to teach the subject matter.

Given the changed landscape in high school financial education, we update the current state of teachers' confidence in teaching personal finance and disposition toward requiring personal finance courses using hand-collected data. We surveyed a set of teachers from a simple random sample of high schools. When inviting teachers to take the survey, we prioritize invitations according to who is most likely to teach personal finance, consistent with state and policymakers' approach to assigning personal finance courses. This uniquely positions our study in capturing personal finance teachers with more certainty than prior studies.

Overall, we find that contrary to a well-cited 2009 study by Way and Holden, teachers likely to teach personal finance are confident in personal finance instruction. Almost all respondents (95%) are confident or very confident in including personal finance in their instruction. However, teachers remain more confident in some areas (budgeting, banking, and saving; credit and debt) than others (taxes; risk and insurance; behavioral finance; investing). Second, we find that 86% of teachers in the sample agree or strongly agree with the statement "[s]tudents should be required to complete a minimum of one-semester personal finance course for high school graduation." While an overwhelming majority agree that financial education should be a high school requirement, another 11% strongly disagree. On average, those with math licensure are most likely to strongly disagree. Third, we find that reported takeup of professional development is correlated with confidence, particularly in topic areas that have lower average confidence levels, as well as for teachers with licensure outside of business or economics.

Our paper is organized as follows: the second section describes our survey methodology and resulting sample. The third section further explains the sample's preparation for and prior experience with personal finance instruction. We also assess which professional and demographic characteristics correlate with confidence in personal finance instruction. The fourth section reveals the sample's opinions on personal finance requirements. Finally, we conclude with an overview of how confidence and training receipt has changed in the past decade and its implications for current policy efforts in preparing teachers for personal finance instruction.

## 2 The sample

We seek to define a nationally-representative sample of teachers who are likely to teach personal finance, or who would be the teachers chosen to teach personal finance if it became a part of the school's curriculum.

We first obtained a random sample of all U.S. high schools based on data from the NCES. We began with a list of 4,346 randomly selected schools.<sup>1</sup> From each school, a research assistant searched for a teacher most likely to teach personal finance (currently) or most likely to be selected to teach personal finance (if it became a requirement, for example) in the following way:

- 1. Find the teacher who teaches personal finance. If there is none,
- 2. Find a teacher likely to teach personal finance in the following order: Business, Economics, Consumer Science.
- 3. If none of the above can be found, select a Social Studies teacher.
- 4. Repeat the process until you can find a teacher with an e-mail address (NOT a contact form).
- 5. If none of those fields can be found, find any teacher for whom an e-mail address exists. Pick one at random.<sup>2</sup>

Step 5 intends to match the rhetoric of schools and policymakers: if no one is available or already on payroll who can teach personal finance, then any teacher may be slotted in to teach the course in the event that a state mandate passes. There were 1,565 schools where no e-mails could be obtained. We were able to obtain a valid email address at 2,781 schools.

We distributed surveys beginning on November 30 with reminders occurring through December 22, 2020. Gift cards for lottery winners were distributed on Dec 23rd. These respondents were offered an incentive: a raffle to win one of 20 \$100 Amazon gift cards. Our final response rate to our emails was 15%.

<sup>&</sup>lt;sup>1</sup>This number seems arbitrary at first, but we actually generated a list of 5,000 randomly selected schools with the intention of going as far as we could before we launched the survey on November 30th. We wanted to have ample time before the Christmas holiday for teachers to complete the survey.

<sup>&</sup>lt;sup>2</sup>Students were told to start at the top of the list of names alphabetically and continue down counting, keeping a record of the number of times they counted the last time.

An additional 74 observations came after a post on a financial literacy teacher's Facebook group (consisting of over 4,000 members). They were not offered an incentive. We verified that none of these observations had duplicate e-mail addresses or IP addresses, and if we drop these individuals our findings remain consistent.

An initial study by Way and Holden (2009) inspired this work, though there are some important differences. First, they choose eight states—two from each Census region—from which they include nine school districts in each. In addition, they select an elementary, middle, and high school within the school district. Instead, we start with a sample of high schools and randomly select schools from which to search for teacher e-mail addresses. Second, they choose any teacher from the school, and we select teachers who are likely to be candidates for teaching personal finance. However, in the event that school either has no teacher related to personal finance or has no e-mail address available, we select any teacher. This allows cleaner comparisons across the two studies.

Table 1: Descriptive Statistics

	Our Sample	NCES 2017-2018
Female	0.664	0.765
	(0.473)	(0.282)
White	0.931	0.793
	(0.254)	(0.347)
Tenure $< 3$	0.0644	0.089
	(0.246)	(0.189)
Tenure $3-9$	0.204	0.283
	(0.404)	(0.340)
Tenure $10-20$	0.353	0.399
	(0.479)	(0.346)
Tenure $\geq 20$	0.378	0.228
	(0.485)	(0.291)

Notes: The first column depicts the summary statistics in our sample, where N=450 for those who answer gender, race/ethnicity, and tenure. The second column depicts summary statistics for the population of primary and secondary (excluding kindergarten) public school educators from the National Center for Education Statistics (NCES) for the most recent year of available data (AY 2017-2018). These data come from the NCES Digest (2019, Table 209.10).

The demographic breakdown of our sample is as follows. Our full sample includes 508 observations, though 477 made it through the full survey. Of those 477 respondents, some respondents skipped at least one question in the survey. Thus, our analytic sample will be roughly 400 for each of our models. When we compare

descriptive statistics, we will, however, use the full sample of respondents for each question. Our sample represents 47 states, with the District of Columbia, Mississippi, and Hawaii missing. Of the final sample 64% of teachers identify as women and 93% identify as non-Hispanic white. When we compare this to the full breakdown of all teachers from data from the U.S. Department of Education's National Council on Education Statistics data from the most recent year (2017–2018 academic year), our sample is slightly less female and has a higher concentration of white teachers (Table 1). The average tenure reported in our sample (16.5 years) matches the distribution of tenure for the greater pool of all teachers.

Biz Con Sci Econ ELA Arts Foreign Math Music SS Sci Other Licensure Area

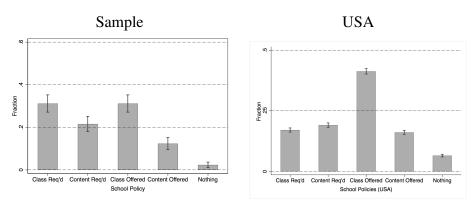
Figure 1: Licensure in the Sample

Notes: This figure depicts respondents' main area of licensure. Biz represents business; Con Sci represents consumer science; Econ represents economics; ELA represents English/language arts; Arts represents fine arts; Foreign represents foreign languages; Math represents mathematics; SS represents social studies; Sci represents science; Other represents all other licensure areas.

We next document the main area of licensure for respondents in our sample in Figure 1. By design, 91% of our sample has a main licensure in areas that at least are somewhat related to personal finance: business, consumer science, economics, math, and social studies. However, we think it is important to include the remaining 9% (46 respondents) who are not in an area related to personal finance. This is because when a mandate requires personal finance instruction in high school, there is not always a teacher specialized in a related discipline with a free enough schedule to take on the additional content. Thus, we will separately investigate how confident those with main licensure areas less related to financial literacy are in teaching personal finance content.

Finally, we examine the degree to which our sample stacks up with national data on school financial education policy. We ask respondents if their school requires a standalone course in personal finance, requires personal finance to be embedded into another required class, if a standalone elective course is offered, if personal finance content is offered within an elective course, or if their school does not have any personal finance material included in the high school's offerings. In Figure 2 we compare this to the data of all school policies among U.S. schools with online course catalogs from Urban (2020). While the full national sample has fewer schools with personal finance requirements and more schools with standalone electives, the distribution is not that far off.

Figure 2: School Policy



Notes: The figure to the left depicts the fraction of respondents in schools with (1) a standalone personal finance course requirement for high school graduation, (2) personal finance included within another required class, (3) a standalone personal finance course offered as an elective, (4) personal finance content is covered within another elective, (5) no personal finance content in any courses within the high school.

These do not sum to 1, as a small fraction of respondents responded that they were unsure.

The figure to the right depicts the 2019-2020 academic year school policies across the country. These data can be found at www.carlyurban.com/home/financial-education.

# 3 Are teachers prepared for personal finance instruction?

Are teachers more prepared for personal finance instruction in 2020 than they were in 2009? In Figure 3, we show the fraction of respondents who report being confident or very confident in teaching personal finance material. The first bar considers any type of personal instruction; the second two categories mimic those in Way and Holden (2009), which ask about finding personal finance resources online and teaching personal finance to diverse learners, respectively. We then consider confidence in teaching a variety of content areas: investing (investing); credit and debt (debt); taxes (tax); budgets, banking and saving (budgets); risk and insurance (risk); and behavioral finance (behav fin). Figure 3 considers the full sample (Panel A) and a sample

for which none of the respondents have licensure consistent with a typical personal finance teacher (e.g., they are licensed in English/Language Arts, Fine Arts, Foreign Language, Music, Science, and Other) in Panel B.

When compared to the most recent comprehensive study on teacher confidence (Way and Holden, 2009), we find that teachers are much more prepared for personal finance instruction in 2020 than they were in 2009.<sup>3</sup> In 2009, 45.5% of respondents felt adequately or very well qualified to teach financial literacy concepts within their discipline. In 2020, we find that 95% of respondents are confident or very confident in teaching financial literacy concepts within their discipline. Further, only 8.7% of teachers felt very well qualified to integrate personal finance into their discipline, but this grew to 70% in 2020. Overall, teachers are least likely to be confident (or very confident) teaching content areas that are likely more challenging: investing, taxes, risk and insurance, and behavioral finance.

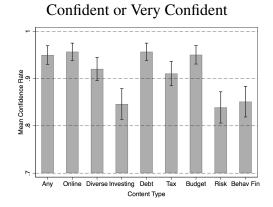
While our samples differ in that we define a sample of likely personal finance teachers, recall that we also pulled samples of teachers from different disciplines to address the possibility that any teacher may end up fulfilling a required personal finance course mandate. Panel B of Table 3 shows the average level of confidence for the sample of those who are licensed in something unrelated to personal finance. In both cases, these are not statistically different than the average levels of confidence for the full sample, though the sample size is smaller (N=42). We recognize that this could be in part because teachers licensed in fields outside of personal finance may be least interested in completing a survey related to financial education. However, we believe that this is somewhat mitigated due to the survey timing and the incentive. Further, while confidence in personal finance instruction overall is higher, these teachers are less likely to be very confident in areas that are more challenging: investing, taxes, and risk and insurance. This assures our measures.

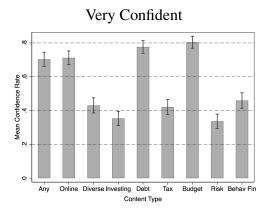
We posit two potential reasons for the substantial increase in preparation to teach financial education. First, financial education graduation requirements have expanded vastly since the mid-2000s. The number of states that require personal finance instruction to be either embedded in another class, included standards within a content area, or taught as a standalone course has more than doubled since 2009 (from 15 to 32). This expansion may have forced teachers to become more prepared to teach personal finance content. Indeed, this could be coming from more teachers actually having to teach personal finance—a learning by doing model. We report the likelihood of teaching personal finance in Figure 4. This hypothesis is consistent with the increase in teachers reporting that they teach personal finance content: only 29.7% of teachers had ever taught financial literacy in 2009 (Way and Holden, 2009), but 42% of our sample report currently teaching a standalone course in personal finance, 28% report

<sup>&</sup>lt;sup>3</sup>We edited the question from Way and Holden (2009) on "how qualified are you" to "how confident are you," so teachers do not confuse licensure or credentials with confidence.

Figure 3: Average confidence across topics

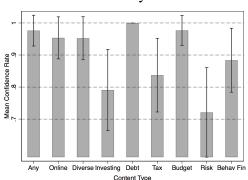
Panel A: Full Sample

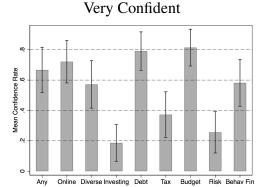




Panel B: Teachers Without Personal Finance-Related Licensure

Confident or Very Confident





Notes: This figure depicts the proportion of respondents that reported being at least confident and very confident in teaching the given topic. Topics include: any personal finance content (any); finding personal finance content online (online); teaching personal finance to diverse learners (diverse); investing (investing); credit and debt (debt); taxes (tax); budgets, banking, and saving (budgets); risk and insurance (risk); behavioral finance (behav fin). Teachers without personal finance licensure include English/Language Arts, Fine Arts, Foreign Language, Music, Science and Other.

currently teaching personal finance within another course, and 13% report having taught personal finance in the past but do not currently teach it. While it could be that the eight states sampled in the Way and Holden (2009) study inadvertently missed states with financial education graduation requirements, we believe that the evidence points to an increase in confidence at least in part due to necessity after state policies were enacted.

Course Content Used to Never PF Main Class
Do you currently teach PF?

Figure 4: Do you teach personal finance?

Notes: This first four bars of this figure depict the fraction of respondents who (1) teach a standalone personal finance course, (2) teach personal finance within another class, (3) used to teach personal finance in some capacity but no longer do, (4) have never taught personal finance content in any capacity. The fifth bar asks if the teacher's main class is personal finance.

Second, professional development opportunities for teachers has expanded. Way and Holden (2009) found that 18.9% of respondents took a non-credit workshop on financial education in the past three years. These were primarily offered by school districts, financial planners, and financial institutions. In 2020, we find that 54% of respondents have done some professional development related to financial education in the last year. Of those completers, 88% reported using the Next Gen Personal Finance free-of-charge programs, and 92% of respondents used a public or non-profit source of professional development. These providers include local colleges and universities, Federal Reserve Banks, Jump\$tart Coalitions, and local Councils on Economic Education. Thus, the shift in availability of low-cost professional development may have improved teacher preparedness. We explore this further in the next section.

#### 3.1 What correlates with confidence?

We next seek to understand which teacher characteristics correlate with confidence in personal finance instruction. To do this, we run linear probability models where confident (those who report being confident or very confident) and very confident (those who report being very confident) are our two separate dependent variables of interest.

We include a series of control variables throughout. First, we account for the financial situation of the teacher using the U.S. Consumer Financial Protection Bureau's financial well-being (FWB) scale. The financial well-being scale is designed to measure one's ability to keep up with month-to-month or day-to-day finances, as

well as their ability to meet their unique future financial goals. The scale ranges from 0 to 100, with higher scores reflecting more financial freedom. Importantly, the scale is intended to be independent of income.<sup>4</sup> Second, we control for demographic characteristics: a female dummy, a dummy for whether or not the respondent is non-Hispanic white, tenure, tenure squared (in case there are diminishing returns to tenure), and a series of licensure categories. Third, we control for whether or not personal finance is the teacher's main class. Fourth, we control for whether or not over half of the school's student body receives free or reduced-price lunch to account for school-level poverty.

We are particularly interested in two explanatory variables, as explained in the previous section. First, did the teacher complete professional development related to personal finance in the last year? Second, does the state of instruction require students to complete some level of personal finance instruction in schools prior to graduation?

Table 2 and Table 3 show these results for the confident and very confident measures, respectively. We begin with discussing our two explanatory variables of interest. As a reminder, these regressions present correlations that in no way imply causality. First, we see that professional development is positively associated with confidence. In particular, Table 2 and 3 show that professional development is associated with a 9.7 percentage point increase in confidence to teach investing and a 10.7 percentage point increase in confidence to teach risk and insurance, two topics that had lower confidence associated with them in Figure 3. However, there are positive associations across all content areas.<sup>5</sup> Second, state policy requiring personal finance instruction prior to high school graduation does not seem to be highly correlated with teacher confidence.

Our control variables provide a few additional takeaways. Teacher's financial well-being (FWB) is highly associated with their confidence to teach the material. A 1-unit increase in the FWB score is associated with a 0.2 percentage point increase in the probability of being somewhat or very confident. This correlation is even larger when considering who answered "very confident" on each question (a 1-unit increase in the FWB is associated with a 0.8 percentage point increase in the probability of being somewhat or very confident). The relationship persists across content areas. This suggests that making sure teachers can keep up with their month-to-month and day-to-day finances is important for their ability to confidently teach personal finance

<sup>&</sup>lt;sup>4</sup>While we did not collect age directly, we use tenure to proxy for age when creating the FWB scores by adding 22 to tenure. This is required, as the FWB scoring method is different for those under 62 and those 62 and over. With this method, only eight respondents are 62 or over.

<sup>&</sup>lt;sup>5</sup>In Table 4, we look at who is most likely to engage in professional development. Women were 20 percentage points more likely to choose professional development than men. Those with social studies licensure are less likely and those with consumer science licensure are more likely to do professional development when compared to other licensure areas (art, music, foreign language, English/language arts, science, and other).

themselves. This is consistent with work by Frisancho (2020), who shows that when teachers are randomly assigned to financial education instruction, their own financial situations improve.

Another key finding is that women are less confident than men across nearly all content areas, and the gap is sizable. In Table 2 the gap between men and women in the three categories with the lowest confidence levels in general—investing, taxes, and risk and insurance—is larger than the gap between teachers who do and do not do professional development. This is true as well in Table 3, when considering whether or not women are "very confident." In fact: women are much less likely to report being "very confident" across all topics. This is consistent with previous work showing that women have less financial confidence (Barber and Odean, 2001; Bhandar and Deaves, 2006; Bannier and Schwarz, 2018; Cueva et al., 2019; Fonseca and Lord, 2020).

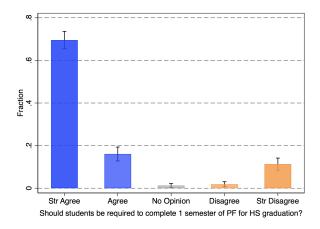
While we report the remaining coefficients on control variables, no distinct patterns of signs and statistical differences across the remaining controls exist.

# 4 Teacher's Opinions on Personal Finance Requirements

A growing body of research using quasi-experimental methods to document causal effects shows that requiring personal finance prior to high school graduation increases credit scores (Brown et al., 2016; Urban et al., 2020), reduces delinquencies (Brown et al., 2016; Urban et al., 2020), reduces reliance on alternative financial services (Harvey, 2019), reduces non-student debt (Brown et al., 2016), shifts students from high- to low-interest methods of financing postsecondary education (Stoddard and Urban, 2020), and increases student loan repayment (Mangrum, 2019).

Do teachers think personal finance education should be a course requirement in U.S. high schools? Figure 5 shows teachers' responses to this question. Specifically, we asked the degree to which teachers agreed with the following statement: "Students should be required to complete a minimum of one-semester personal finance course for high school graduation." 70% of respondents strongly agreed, 16% somewhat agreed, 1% neither agreed nor disagreed, 2% somewhat disagreed, and 11% strongly disagreed. In comparison, Way and Holden (2009) found that 46.2% of their respondents strongly agreed and 42.8% moderately agreed with a very similar statement: "Students should be required to take a financial literacy course or pass a literacy test for high school graduation." Interestingly, the fraction of respondents that strongly disagreed was identical in both studies: 11%. While it is not possible to tell if those who disagreed with the requirement opposed school-based requirements in general or personal finance specifically, we next examine the correlates of responses to the opinion question.

Figure 5: Teachers opinions: should financial education be required in high schools?



Notes: Str Agree and Str Disagree are "strongly agree" and "strongly disagree."

Table 5 shows the teacher characteristics corresponding to the two tales of responses: strongly agree and strongly disagree. While most teacher characteristics such as financial well-being, tenure, sex, whether or not the respondent is white, whether or not the respondent teaches at a school where at least half of students receive free or reduced-price lunch—are uncorrelated with their opinions on required personal finance instruction in high school, a few prominent relationships appear. First, teachers who completed some type of professional development related to personal finance were more 11 percentage points more likely to strongly agree with required personal finance instruction. Second, teachers in states where high school personal finance mandates are already in place are more likely to strongly agree and less likely to strongly disagree. Third, math teachers were more likely to strongly disagree with required personal finance instruction in high school when compared to those with licensure in the "other" category. Teachers with business licensure also were more likely to strongly disagree with required personal finance instruction, though that relationship is only marginally significant and half of the magnitude of the correlation between math licensure and strongly disagreeing with the statement.

On a broader scale, our aforementioned results resemble those of other surveys capturing American adults' opinions about high school personal finance requirements. Figure 6 shows the fraction of respondents who "agree or strongly agree" that personal finance should be a part of schools, though it is asked differently across surveys to either the general population or to teachers specifically. Public support for mandatory high school financial education consistently remains very high, ranging from a

low of 86% currently to 93% in 2018.6

Figure 6: Public Opinion: Should Personal Finance Be in High Schools?

89%ª	93% <sup>b</sup>	93% <sup>b</sup>	90% <sup>c</sup>	86% <sup>d</sup>
2009	2012	2018	2019	2020

Notes: a: Students should be required to take a financial literacy course or pass a literacy test for high school graduation (Way and Holden, 2009), based on a sample of teachers. b: Do you think that financial education should be taught in schools? (Source: Authors' own calculations based on the 2012 National Financial Capability Study and RAND American Life Panel MS 504 in 2018), based on a sample of all adults. c: School-based financial education should be a priority (Lusardi and Hasler, 2019), based on a sample of teachers. d: Students should be required to complete a minimum of one-semester personal finance course for high school graduation (Source: this study).

### 5 Conclusions

We sample likely personal finance teachers nationwide to understand levels of confidence in instruction. We derive three main conclusions from our findings.

First, when compared to a highly-cited study in 2009 (Way and Holden, 2009), teachers are much more confident in integrating personal finance into their classroom. While only 9% of teachers in 2009 felt well-qualified to teach personal finance, 70% of teachers felt very confident in teaching personal finance in 2020. In addition, more teachers are already engaging in personal finance instruction in 2020 when compared to 2009. For example, 30% of teachers had ever taught financial literacy in 2009 (Way and Holden, 2009). In 2020, 42% of taught a standalone course in personal finance, 28% taught personal finance within another course, and another 13% have taught personal finance in the past but were not teaching it at the time of survey. Personal finance instruction may have expanded in part because the number of states requiring personal finance instruction has more than doubled over that timeframe.

Second, an important correlate of confidence in financial literacy instruction is completion of professional development. While this is not a surprising finding in the education world, professional development has notably expanded over the last decade: a rise from 19% (Way and Holden, 2009) over the last three years to 54% in the last year. This is largely driven by an expansion of low-cost or free professional

<sup>&</sup>lt;sup>6</sup> Lusardi and Hasler (2019) consider teacher preparedness as well, though their sample from Mechanical Turk includes teachers and non-teachers, with a subset of K-12 teachers and an even small set of personal finance teachers.

development opportunities for teachers across the country that were virtually non-existent a decade ago.

Third, 70% of teachers strongly agree and another 16% somewhat agree that students should be required to complete a minimum of one-semester personal finance course for high school graduation. Our study and data from previous surveys reveal that strong support for financial education requirements in high school continually persists.

In considering whether to require personal finance in schools, states often highlight the lack of teacher preparedness as the largest inhibitor. This research suggests that teachers are ready and largely willing to take on the new course, provided the time is available in their teaching schedules.

### References

- **Bannier, Christina E., and Milena Schwarz.** 2018. "Gender- and education-related effects of financial literacy and confidence on financial wealth." *Journal of Economic Psychology*, 67: 66–86.
- **Barber, Brad M, and Terrance Odean.** 2001. "Boys will be boys: Gender, overconfidence, and common stock investment." *The Quarterly Journal of Economics*, 116(1): 261–292.
- **Bhandar, Gokul, and Richard Deaves.** 2006. "The Demographics of Overconfidence." *Journal of Behavioral Finance*, 7(1): 5–11.
- Brown, Meta, John Grigsby, Wilbert van der Klaauw, Jaya Wen, and Basit Zafar. 2016. "Financial Education and the Debt Behavior of the Young." *Review of Financial Studies*, 29(9).
- Cueva, Carlos, Iigo Iturbe-Ormaetxe, Giovanni Ponti, and Josefa Toms. 2019. "Boys will still be boys: Gender differences in trading activity are not due to differences in (over)confidence." *Journal of Economic Behavior and Organization*, 160: 100–120.
- **Fonseca, Raquel, and Simon Lord.** 2020. "Canadian Gender Gap in Financial Literacy: Confidence Matters." *Review of Public Economics*, 235(4): 153–182.
- **Frisancho, Veronica.** 2020. "The Impact of Financial Education for Youth." *Economics of Education Review*, 78: 101918.
- **Harvey, Melody.** 2019. "Impact of Financial Education Mandates on Younger Consumers? Use of Alternative Financial Services." *Journal of Consumer Affairs*, 53: 731–769.
- **Lusardi, Annamaria, and Andrea Hasler.** 2019. "Raising Awareness of the Importance of Personal Finance in School: New Insights." *Global Financial Literacy Excellence Center Insights Report*, May.
- **Mangrum, Daniel.** 2019. "Personal Finance Education Mandates and Student Loan Repayment." *Working Paper*.
- **Pelletier, John.** 2017. 2017 National Report Card on State Efforts to Improve Financial Literacy in High Schools. Champlain College Center for Financial Literacy.
- **Stoddard, Christiana, and Carly Urban.** 2020. "The Effects of State Mandated Financial Education on College Financing Behaviors." *Journal of Money, Credit, and Banking*, 52(4): 747–776.

- **Urban, Carly.** 2020. "Financial Education in High Schools Across America." Working Paper, http://www.montana.edu/urban/Report.pdf.
- **Urban, Carly, Maximilian D. Schmeiser, J. Michael Collins, and Alexandra Brown.** 2020. "The effects of high school personal financial education policies on financial behavior." *Economics of Education Review*, 78.
- **Utah State Board of Education.** 2019. "House Bill 286: Financial and Economic Literacy Education Amendments."
- Way, Wendy L, and Karen C Holden. 2009. "Teachers' Background and Capacity to Teach Personal Finance: Results of a National Study." *Journal of Financial Counseling & Planning*, 20(2).

# **Additional Tables**

Table 2: What predicts confidence?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Any	Investing	Debt	Tax	Budget	Risk	Bfin
PD	0.057**	0.097***	0.055***	0.049*	0.036*	0.107***	0.137***
	(0.023)	(0.036)	(0.020)	(0.027)	(0.019)	(0.035)	(0.040)
State Grad Reqmt	-0.006	-0.034	0.014	-0.019	0.013	0.025	0.008
•	(0.022)	(0.036)	(0.022)	(0.029)	(0.023)	(0.036)	(0.036)
FWB	0.002*	0.006***	0.003**	0.004***	0.003**	0.006***	0.004***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
Female	-0.043	-0.144***	-0.014	-0.071**	-0.013	-0.106***	-0.035
	(0.027)	(0.038)	(0.028)	(0.031)	(0.027)	(0.037)	(0.043)
Tenure	-0.003	0.002	0.004	0.008	0.003	0.001	0.007
	(0.004)	(0.006)	(0.004)	(0.005)	(0.004)	(0.006)	(0.007)
Tenure $\times$ Tenure	0.000	-0.000	-0.000	-0.000**	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
White	-0.036**	0.180**	0.042	0.190**	0.037	0.280***	0.067
	(0.015)	(0.078)	(0.048)	(0.074)	(0.052)	(0.077)	(0.073)
$\geq 50\%$ FRPL	0.002	0.021	0.003	0.010	-0.001	0.040	0.015
	(0.022)	(0.033)	(0.019)	(0.026)	(0.021)	(0.034)	(0.036)
PF Main Class	-0.013	0.062**	0.016	0.030	0.004	0.062**	0.041
	(0.014)	(0.027)	(0.015)	(0.023)	(0.024)	(0.029)	(0.039)
Business	0.019	0.122*	-0.032**	0.114**	-0.010	0.227***	0.015
	(0.025)	(0.063)	(0.016)	(0.056)	(0.037)	(0.070)	(0.064)
Cons Sci	0.027	0.006	-0.026	0.011	0.009	0.136	0.063
	(0.025)	(0.113)	(0.016)	(0.100)	(0.034)	(0.109)	(0.059)
Econ	0.001	0.116	-0.027	$0.099^{*}$	-0.011	0.201**	-0.026
	(0.035)	(0.071)	(0.024)	(0.057)	(0.033)	(0.078)	(0.135)
Math	0.024	0.056	-0.037	$0.120^{*}$	-0.009	$0.188^{**}$	0.073
	(0.027)	(0.085)	(0.029)	(0.063)	(0.038)	(0.088)	(0.062)
Soc Stud	-0.078*	-0.061	-0.084***	-0.021	-0.044	0.017	-0.127*
	(0.041)	(0.072)	(0.026)	(0.064)	(0.032)	(0.078)	(0.070)
Observations	392	403	404	401	404	401	393

Notes: Coefficient estimates are from linear probability models reported with robust standard errors in parentheses. \* (p<0.05), \*\* (p<0.01), \*\*\* (p<0.001).PD equals one if the individual attended professional development for personal finance instruction in the last year. State grad reqmt equals one if students in the state are required to complete some personal finance instruction in high school prior to graduation. FWB is the U.S. CFPB's financial well-being score, which ranges from 0 to  $100. \ge 50\%$  FRPL equals one if the teacher works in a school where over half of children receive free- or reduced-price lunch. Tenure is the number of years the individual has been teaching. White does not include those who identify as Hispanic. PF main class equals one if the teacher's main area of instruction is personal finance. Licensure categories are each compared to "Other" which includes all other areas in Figure 1.

Table 3: What predicts strong confidence?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Any	Investing	Debt	Tax	Budget	Risk	Bfin
PD	0.225***	0.112**	0.128***	0.119**	0.100**	0.106*	0.177***
	(0.050)	(0.051)	(0.046)	(0.058)	(0.042)	(0.056)	(0.060)
State Grad Reqmt	-0.047	-0.030	0.039	0.042	0.072*	0.054	0.107**
	(0.042)	(0.048)	(0.042)	(0.053)	(0.041)	(0.049)	(0.052)
FWB	0.008***	0.007***	0.006***	0.006**	0.006***	0.006***	0.005**
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Female	-0.113**	-0.295***	-0.082*	-0.109*	-0.064	-0.104**	-0.061
	(0.047)	(0.050)	(0.044)	(0.056)	(0.042)	(0.053)	(0.056)
Tenure	0.014*	0.004	0.007	0.018*	0.011	0.014*	0.009
	(0.007)	(0.009)	(0.009)	(0.009)	(0.008)	(0.008)	(0.009)
Tenure $\times$ Tenure	-0.000*	-0.000	-0.000	-0.000	-0.000*	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
White	-0.033	0.106	0.055	-0.024	0.080	0.017	0.017
	(0.080)	(0.077)	(0.080)	(0.093)	(0.083)	(0.085)	(0.091)
$\geq 50\%$ FRPL	0.021	-0.070	0.044	0.006	0.014	-0.010	0.011
	(0.042)	(0.046)	(0.040)	(0.051)	(0.038)	(0.048)	(0.051)
PF Main Class	0.020	0.161**	0.057	0.044	0.035	0.089	0.077
	(0.045)	(0.064)	(0.043)	(0.066)	(0.039)	(0.065)	(0.067)
Business	0.200**	0.179**	0.108	0.060	0.093	0.121	-0.060
	(0.084)	(0.080)	(0.075)	(0.088)	(0.071)	(0.088)	(0.090)
Cons Sci	0.291***	$0.227^{*}$	0.004	-0.011	0.111	-0.058	-0.215
	(0.085)	(0.137)	(0.124)	(0.143)	(0.094)	(0.131)	(0.157)
Econ	-0.132	0.025	-0.249	-0.055	-0.009	0.182	-0.246
	(0.164)	(0.157)	(0.193)	(0.203)	(0.123)	(0.189)	(0.167)
Math	-0.013	0.122	-0.047	0.090	0.082	-0.007	-0.183
	(0.112)	(0.097)	(0.100)	(0.115)	(0.083)	(0.107)	(0.118)
Soc Stud	-0.135	0.066	-0.120	0.015	-0.144*	-0.068	-0.163*
	(0.092)	(0.076)	(0.079)	(0.091)	(0.078)	(0.087)	(0.092)
Observations	392	403	404	401	404	401	393

Notes: Coefficient estimates are from linear probability models reported with robust standard errors in parentheses. \* (p<0.05), \*\* (p<0.01), \*\*\* (p<0.001).PD equals one if the individual attended professional development for personal finance instruction in the last year. State grad reqmt equals one if students in the state are required to complete some personal finance instruction in high school prior to graduation. FWB is the U.S. CFPB's financial well-being score, which ranges from 0 to  $100. \ge 50\%$  FRPL equals one if the teacher works in a school where over half of children receive free- or reduced-price lunch. Tenure is the number of years the individual has been teaching. White does not include those who identify as Hispanic. PF main class equals one if the teacher's main area of instruction is personal finance. Licensure categories are each compared to "Other" which includes all other areas in Figure 1.

Table 4: Who selects into professional development?

	(1)
	Did PD
State Grad Reqmt	-0.032
	(0.043)
FWB	-0.001
	(0.002)
Female	0.201***
	(0.051)
White	-0.087
	(0.086)
$\geq 50\%$ FRPL	-0.018
	(0.044)
Tenure	0.004
	(0.008)
Tenure $\times$ Tenure	-0.000
	(0.000)
Business	0.088
	(0.084)
Cons Sci	0.273***
	(0.098)
Econ	-0.056
	(0.186)
Math	0.061
	(0.107)
Soc Stud	-0.381***
	(0.086)
Observations	405

Coefficient estimates are from linear probability models reported with robust standard errors in parentheses. \* (p<0.05), \*\* (p<0.01), \*\*\* (p<0.001).PD equals one if the individual attended professional development for personal finance instruction in the last year. State grad reqmt equals one if students in the state are required to complete some personal finance instruction in high school prior to graduation. FWB is the U.S. CFPB's financial well-being score, which ranges from 0 to  $100 . \ge 50\%$  FRPL equals one if the teacher works in a school where over half of children receive free- or reduced-price lunch. Tenure is the number of years the individual has been teaching. White does not include those who identify as Hispanic. PF main class equals one if the teacher's main area of instruction is personal finance. Licensure categories are each compared to "Other" which includes all other areas in Figure 1.

Table 5: Who strongly agrees or strongly disagrees with requiring personal finance in high school?

(1)			
PD		(1)	1 1
State Grad Reqmt		Str Agree	Str Disagree
State Grad Reqmt         0.140***         -0.075*           (0.048)         (0.039)           Female         0.073         -0.043           (0.053)         (0.040)           FWB         -0.001         0.000           (0.002)         (0.002)         (0.002)           Tenure         0.009         -0.006           (0.010)         (0.008)         (0.008)           Tenure × Tenure         -0.000         (0.000)           White         -0.011         -0.063           (0.086)         (0.067)           FRPL         0.026         0.012           (0.045)         (0.033)           PF Main Class         0.075         -0.017           (0.051)         (0.039)           Business         0.003         0.086*           (0.080)         (0.050)           Cons Sci         0.022         0.116           (0.110)         (0.094)           Econ         -0.235         -0.048           (0.177)         (0.055)           Math         -0.201*         0.164**           (0.108)         (0.078)           Soc Stud         -0.140         0.033           (0.055)	PD	0.122**	-0.073*
Female		(0.055)	(0.043)
Female	State Grad Reqmt	$0.140^{***}$	-0.075*
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(0.048)	(0.039)
FWB	Female	0.073	-0.043
Tenure		(0.053)	(0.040)
Tenure 0.009 -0.006 (0.010) (0.008)  Tenure × Tenure -0.000 0.000 (0.000)  White -0.011 -0.063 (0.086) (0.067)  FRPL 0.026 0.012 (0.045) (0.033)  PF Main Class 0.075 -0.017 (0.051) (0.039)  Business 0.003 0.086* (0.080) (0.050)  Cons Sci 0.022 0.116 (0.110) (0.094)  Econ -0.235 -0.048 (0.177) (0.055)  Math -0.201* 0.164** (0.108) (0.078)  Soc Stud -0.140 0.033 (0.085)	FWB	-0.001	0.000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		(0.002)	(0.002)
Tenure × Tenure	Tenure	0.009	-0.006
White		(0.010)	(0.008)
White -0.011 -0.063 (0.086) (0.067)  FRPL 0.026 0.012 (0.045) (0.033)  PF Main Class 0.075 -0.017 (0.051) (0.039)  Business 0.003 0.086* (0.080) (0.050)  Cons Sci 0.022 0.116 (0.110) (0.094)  Econ -0.235 -0.048 (0.177) (0.055)  Math -0.201* 0.164** (0.108) (0.078)  Soc Stud -0.140 0.033 (0.088) (0.055)	Tenure × Tenure	-0.000	0.000
FRPL (0.086) (0.067) FRPL (0.026 0.012 (0.045) (0.033) PF Main Class (0.075 -0.017 (0.051) (0.039) Business (0.080) (0.050) Cons Sci (0.080) (0.050) Cons Sci (0.110) (0.094) Econ (0.177) (0.055) Math (0.177) (0.055) Math (0.108) (0.078) Soc Stud (0.088) (0.055)		(0.000)	(0.000)
FRPL 0.026 0.012 (0.045) (0.033)  PF Main Class 0.075 -0.017 (0.051) (0.039)  Business 0.003 0.086* (0.080) (0.050)  Cons Sci 0.022 0.116 (0.110) (0.094)  Econ -0.235 -0.048 (0.177) (0.055)  Math -0.201* 0.164** (0.108) (0.078)  Soc Stud -0.140 0.033 (0.088) (0.055)	White	-0.011	-0.063
PF Main Class		(0.086)	(0.067)
PF Main Class 0.075 (0.051) (0.039) Business 0.003 0.086* (0.080) (0.050) Cons Sci 0.022 0.116 (0.110) (0.094) Econ -0.235 -0.048 (0.177) (0.055) Math -0.201* 0.164** (0.108) (0.078) Soc Stud -0.140 0.033 (0.088) (0.055)	FRPL	0.026	0.012
Business 0.003 0.086* (0.080) (0.050)  Cons Sci 0.022 0.116 (0.110) (0.094)  Econ -0.235 -0.048 (0.177) (0.055)  Math -0.201* 0.164** (0.108) (0.078)  Soc Stud -0.140 0.033 (0.088) (0.055)		(0.045)	(0.033)
Business       0.003       0.086*         (0.080)       (0.050)         Cons Sci       0.022       0.116         (0.110)       (0.094)         Econ       -0.235       -0.048         (0.177)       (0.055)         Math       -0.201*       0.164**         (0.108)       (0.078)         Soc Stud       -0.140       0.033         (0.088)       (0.055)	PF Main Class	0.075	-0.017
Cons Sci (0.080) (0.050) Cons Sci (0.022 0.116) (0.110) (0.094) Econ -0.235 -0.048 (0.177) (0.055) Math -0.201* 0.164** (0.108) (0.078) Soc Stud -0.140 0.033 (0.088) (0.055)		(0.051)	(0.039)
Cons Sci 0.022 0.116 (0.110) (0.094) Econ -0.235 -0.048 (0.177) (0.055) Math -0.201* 0.164** (0.108) (0.078) Soc Stud -0.140 0.033 (0.088) (0.055)	Business	0.003	$0.086^{*}$
Econ (0.110) (0.094) (0.094) (0.177) (0.055)  Math (0.108) (0.078)  Soc Stud (0.088) (0.055)		(0.080)	(0.050)
Econ -0.235 -0.048 (0.177) (0.055) Math -0.201* 0.164** (0.108) (0.078) Soc Stud -0.140 0.033 (0.088) (0.055)	Cons Sci		0.116
$\begin{array}{cccc} & (0.177) & (0.055) \\ \text{Math} & -0.201^* & 0.164^{**} \\ & (0.108) & (0.078) \\ \text{Soc Stud} & -0.140 & 0.033 \\ & (0.088) & (0.055) \\ \end{array}$		(0.110)	(0.094)
Math -0.201* 0.164** (0.108) (0.078) Soc Stud -0.140 0.033 (0.088) (0.055)	Econ	-0.235	-0.048
Soc Stud (0.108) (0.078) -0.140 0.033 (0.088) (0.055)		(0.177)	, ,
Soc Stud -0.140 0.033 (0.088) (0.055)	Math	-0.201*	
(0.088) $(0.055)$		(0.108)	(0.078)
	Soc Stud	-0.140	0.033
Observations 405 405		(0.088)	(0.055)
	Observations	405	405

Coefficient estimates are from linear probability models reported with robust standard errors in parentheses. \* (p<0.05), \*\*\* (p<0.01), \*\*\* (p<0.001).PD equals one if the individual attended professional development for personal finance instruction in the last year. State grad reqmt equals one if students in the state are required to complete some personal finance instruction in high school prior to graduation. FWB is the U.S. CFPB's financial well-being score, which ranges from 0 to  $100 . \ge 50\%$  FRPL equals one if the teacher works in a school where over half of children receiled free- or reduced-price lunch. Tenure is the number of years the individual has been teaching. White does not include those who identify as Hispanic. PF main class equals one if the teacher's main area of instruction is personal finance. Licensure categories are each compared to "Other" which includes all other areas in Figure 1.