

The Impact and Implementation of Personal Finance Courses
in High School and Undergraduate Education

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Abstract

Personal finance courses (PFCs) have been studied over the years, and results have shown positive impacts on students' financial behaviors and even on the students' family members. PFCs can cover a wider variety of topics, depending on the school, but the common ones included are financial planning, expense management/budgeting, savings, investments, and debt or credit management. Offered at both high school and collegiate levels, PFCs provide teens and young adults with critical personal finance concepts that serve as a foundation to build long-term wealth. However, finance professionals can fail to see the benefits of instilling these concepts at a young age and rather focus on fixing clients' financial issues later on in life.

This thesis provides a comprehensive overview of various aspects of PFCs and looks to answer four questions. What are the short-term and long-term benefits students enjoy from taking a PFC? How does a PFC affect those closest to the student enrolled in the course? How do state policies impact the implementation of PFCs? Does artificial intelligence change the need for a formal course on personal finance? By answering these questions, this paper presents clear evidence for the inclusion of PFCs in the regular school curriculum. Ultimately, the work in this literature review could result in increased awareness from those in the finance field about the need for financial education in early adulthood and how that financial education should be delivered.

Methods

To attain the studies needed for my literature review, I first collected peer-reviewed articles from high-quality journals, such as Journal of Financial Economics and Journal of

Financial Literacy and Wellbeing, to provide a strong body of evidence for my research. I primarily used Oakland University's online Library OneSearch tool, including keywords in my search terms, such as "personal finance courses," "benefits," "education," "high school," "state mandates," and "Artificial Intelligence." To ensure I have trusted sources, I applied a filter to search for only peer-reviewed articles.

After collecting my sources, I thoroughly read through each one and analyzed the structure of the studies. In doing this, I checked the sample size, region of study, and any other critical factors that may impact the quality of the study. Lastly, I interpreted any theoretical frameworks or assumptions that may be applied to the studies. This rigorous process provided me with high-quality papers to use in my literature review, bolstering the credibility of my thesis.

Introduction

As of March 2023, 22.7% of high school students have access to personal finance courses (Next Gen Personal Finance, 2023). With such a low percentage of students being educated in basic financial literacy, many are graduating without the proper knowledge and skills to succeed financially. Luedtke and Urban (2023) explain, "Financial literacy is also low among high school students, indicating that the next generation of adults is ill-equipped to face the challenges and changes that are ahead of them." In high school and college, students begin to gain more financial responsibility and demonstrate independence outside of their parents' aid. Major milestone events like getting their first car, moving out of their childhood home, opening up their first bank accounts, and landing a starter job all usually occur within this period and demand varying levels of financial knowledge/responsibility. With this shift in responsibility, students need to understand essential yet simple financial concepts to manage their money well during these crucial years and start learning the keys to stewarding their financial resources wisely. To

add to that, Eichelberger et al. (2023) found a positive correlation between the completion of a personal finance course and retention and graduation rates among undergraduate students. So, financial education has implications for broader educational success as well. However, while a PFC might seem like a clear element of the national education system to instill, many factors impact the acceptance and effectiveness of a PFC, including state mandates and new technology. Although some state governments mandate a policy for schools to include personal finance education in their curriculum, these mandates can lack efficacy due to implementation challenges. Furthermore, rising technology, such as Artificial Intelligence, provides financial education content in seconds, upon prompting, and questions the need for a formal PFC.

The goal of this literature review is to increase the awareness and understanding of the long-term impact of personal finance courses being offered in high schools and colleges and provide compelling evidence for the inclusion of PFCs while students are in their late teenage years and entering adulthood. This paper accomplishes that goal by collecting credible peer-reviewed studies that show the significant effect personal finance courses have on students and their parents, the effectiveness of state mandates, and whether Artificial Intelligence should replace traditional PFCs.

Literature Review

Current State of Personal Finance Courses

Analyzing the impacts of personal finance courses leads us first to examine the current state of U.S. PFCs. A peer-reviewed article by Allison Oldham Luedtke and Carly Urban cites hopeful statistics in recent years: “In addition to the number of states adding guarantees going from five to over 15 since 2019, schools are acting independently to increase access. In the 2022–2023 academic year, 2,633,919 students were enrolled in schools requiring a standalone

personal finance course” (2023). Personal finance classes in high school have not historically been prioritized in a school’s curriculum. However, the number of states mandating students to take personal finance is growing. In 2007, the first standalone course requirement was enacted. Now, eight states require a standalone course, and thirty-three states require personal finance content for high school graduation (Urban & Luedtke, 2023). Figure 1 shows geographically which states are further ahead in their personal finance education requirements and how states vary internally on their standalone requirements versus requiring some level of personal finance content.

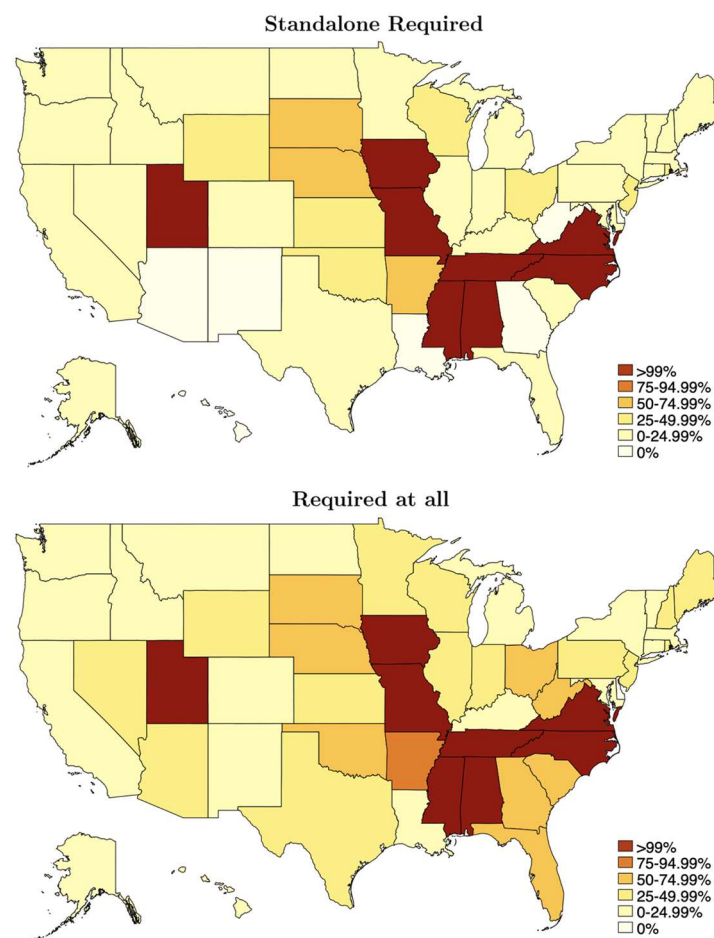


Figure 1. Luedtke, A. O., & Urban, C. (2023). High school financial education courses in the United States.: What is the importance of setting state policies? *Journal of Financial Literacy and Wellbeing*, 1(3), 431–449. doi:10.1017/flw.2024.1

However, alarming differences appear between schools with primarily non-white students, as they are 13-14% less likely to be in a school where a personal finance course is required (Luedtke & Urban, 2023). This inequitable access to PFCs needs to be addressed in school systems. Additionally, that notion drives tangent to the point that poorer households experience more benefits from students participating in a PFC and displays that not only should PFCs be offered, but where they are offered remains critical. The goal should be to provide every student access to personal finance early on in their life; still, short-term goals should focus on the population with the greatest financial distress.

The Benefits of Personal Finance Courses to Students

Personal finance courses equip students with the financial knowledge to build healthy financial habits and set themselves up well post-schooling. LaBorde and Mottner (2016) conducted a study to “explore whether a personal finance course at a university can raise the overall knowledge level of college students in six areas of financial literacy.” Those areas were money management, debt management, taxes, insurance, investing, and retirement. Furthermore, the study looked at the relationship between financial literacy and age, gender, and ethnic demographic and if offering PFC “leveled the playing field” for those categories. Pre- and post-tests were administered at a public university before and after, respectively, each class section over a two-year period. Respondents averaged a score of 58% (17.46/30) on the pre-test and 72.3% on the post-test; the greatest area of improvement between the tests was debt management, and the least improved was money management. With an increase of more than 14 percentage points, the results of these tests show that the overall financial literacy of the students had a significant gain. Additionally, in the pre-test, men were found to perform better in debt management and investing, while women performed better in retirement; even so, the post-test

scores showed no significant differences between genders in any category. Groups of all ages experienced an overall score increase, but the score disparity between Caucasians and non-Caucasians grew between the pre and post-tests. Through a statistical analysis of the debt management category, it was found that the mean for the pre-test score was notably less than the mean for the post-test score, showing a p-value of 0.003. With debt being a prevalent tool for college-aged students to leverage for college, increased knowledge around this topic will only help students approach their choices with debt more carefully. Broadly, these college students became more financially literate because of the personal finance course. PFCs also minimize and eliminate the knowledge gap between genders and work in the same way to bridge the gap between ethnicities.

Not only have personal finance courses impacted students' financial literacy, but they have also had a noticeable positive correlation between completing a personal finance course and graduation rates. Eichelberger et al. (2019) studied 1,233 students at a Pacific Northwest university to understand the relationship between the completion of a college-level personal finance course and undergraduate retention and graduation rates. The study cites that college students with low financial literacy face a dual challenge of affording the cost of attending a university (tuition, books, etc) and spending their available resources appropriately (Eichelberger et al., 2019). As a result, students can drop out of college or undergo significant financial pressure, creating a mental strain that affects every area of their lives. The research question was simple: "Do the students who took a personal finance course and pass tend to continue as a student and / or graduate more often than students who have not taken this course and passed a comparable elective?" (Eichelberger et al., 2019). To answer this, the study concludes that students who took the "Personal Finance" class are more likely to see academic success in terms

of student retention or graduation. Quantifying this impact, students who took the personal finance course had a rate of successful retention that was 10.8-18.9% higher than those who did not.

Another study conducted by Veronica Frisancho (2023) in the *Economic Journal* drew data from 300 high schools over six regions in Peru, focusing on grades 9-11, to evaluate the immediate and long-term effects of an “in-class intervention on financial literacy and financial behaviour.” The topics covered differed between grades:

1. 9th graders learned about needs, resources, and budgeting.
2. 10th graders received lessons on financial products, services, and long-term decisions.
3. 11th graders digested material on responsible financial consumers and access to information in financial markets.

An exam was given targeting the respective material to the students before and after the lessons were delivered. Analysis of the exam scores shows that the students who received the lessons increased their scores by 0.16 standard deviations, providing evidence that the personal financial intervention increased the students’ financial literacy. Furthermore, Frisancho (2023) explains, “The provision of financial education also led to modest immediate changes in financial autonomy and financial savviness, the latter measured as budgeting usage and having healthy shopping habits.” Additionally, credit bureaus provided data on the students and teachers three years after the intervention was instituted. “Credit bureau records from the experimental sample show that early improvements in financial literacy translate into limited but positive long-lasting changes in financial behaviour among high school students” (Frisancho, 2023). As a result of the credit bureau analysis, Frisancho did not see lasting benefits in students’ overall credit or credit repayment habits. However, the students who had outstanding loans and were a part of the

intervention benefited from reduced arrears by 20%. The study also concluded that the time invested in the personal finance course did not hinder academic performance in other classes. All in all, Frisancho's study found immediate improvements in the participants' habits around money, like budgeting and wise shopping, and long-term gains in the form of reduced arrears, signifying that students were better about paying their debt on time.

Spillover Effects Beyond Students

In the same study, Frisancho (2023) shows that these positive effects reach beyond just the students. With the same data pulled from around 20,000 Peruvian high school students across 300 schools, students included the names of their parents/guardians, leading to 11,090 trackable parental data points. The average age for these adults was 50, and 55% completed secondary schooling. Frisancho states her conclusion,

The positive spillover effects are more salient and robust among parents from poorer households: among them, the treatment reduces default probability by 26%, increases credit scores by 5%, and increases current debt levels by 40%. The treatment also has stronger effects among the parents of daughters, who experience a significant 6.7% increase in their credit score and a 28% reduction in their loan portfolio in arrears (2023).

While the average spillover effects among parents were fairly mild, the impact on parents from poorer households showed promising financial improvements. This traces to the fact that students influence their parents through everyday conversations around the house: "76% of the students talk to their parents about the household's finances and/or budget while 72% of them help their parents prepare a household budget" (Frisancho, 2023). Diving one level deeper, 80% of students from low socioeconomic status (SES) households talk to their parents about finances, unlike 73% of students within high-SES households (Frisancho, 2023). Furthermore, 78% of the

low-SES students help with budgeting, trumping the 67% of high-SES students (Frisancho, 2023). The data implies that more conversations lead to more significant spillover effects, and children from less affluent households interact in more financially oriented conversations with their parents.

It is worth pointing out that debt levels in poorer households were higher by 40%, which could be a result stemming from the lower default probability and higher credit score, so parents felt more comfortable taking on more debt. Disparity existed not only between poor and wealthy households but also in terms of gender. Girls seem to have a more significant impact than boys on improving parents' financial behaviors, either through more conversations with their parental figures or increased effectiveness in delivering financial literacy. This study implies that personal finance courses offered to high school students can have positive implications on the trusted adults in those students' lives, especially for households in lower socioeconomic classes. It shows how gender can play a role beyond themselves in the effectiveness of a PFC.

State Mandates

With more states mandating PFCs in the school system, it is important to know how effective these policies are in achieving implementation in the school systems. To study this, Luedtke & Urban (2023) collected data from over 19,000 high school PFCs and 7,400 high schools. Research associates hand-collected the data from the schools' websites, verifying the course catalog and graduation requirements and recording the class name, description, duration, whether it was a standalone course or a class that embedded financial literacy topics into another class, and whether or not it was a graduation requirement (Luedtke & Urban, 2023). "In states where personal finance is required within another subject, only 39% of students are in schools where personal finance content is required" (Luedtke & Urban, 2023). This statistic shows an

apparent linkage between a state policy and the practical implementation and effects of that policy. One reason for this linkage is the time delay between an enacted state policy and schools implementing their personal finance curriculum. Figure 2 shows five states that have undergone or are undergoing the process of putting in place PFCs in their high schools. While some states move swiftly through this process, states like Rhode Island can take many years to fully implement PFC.

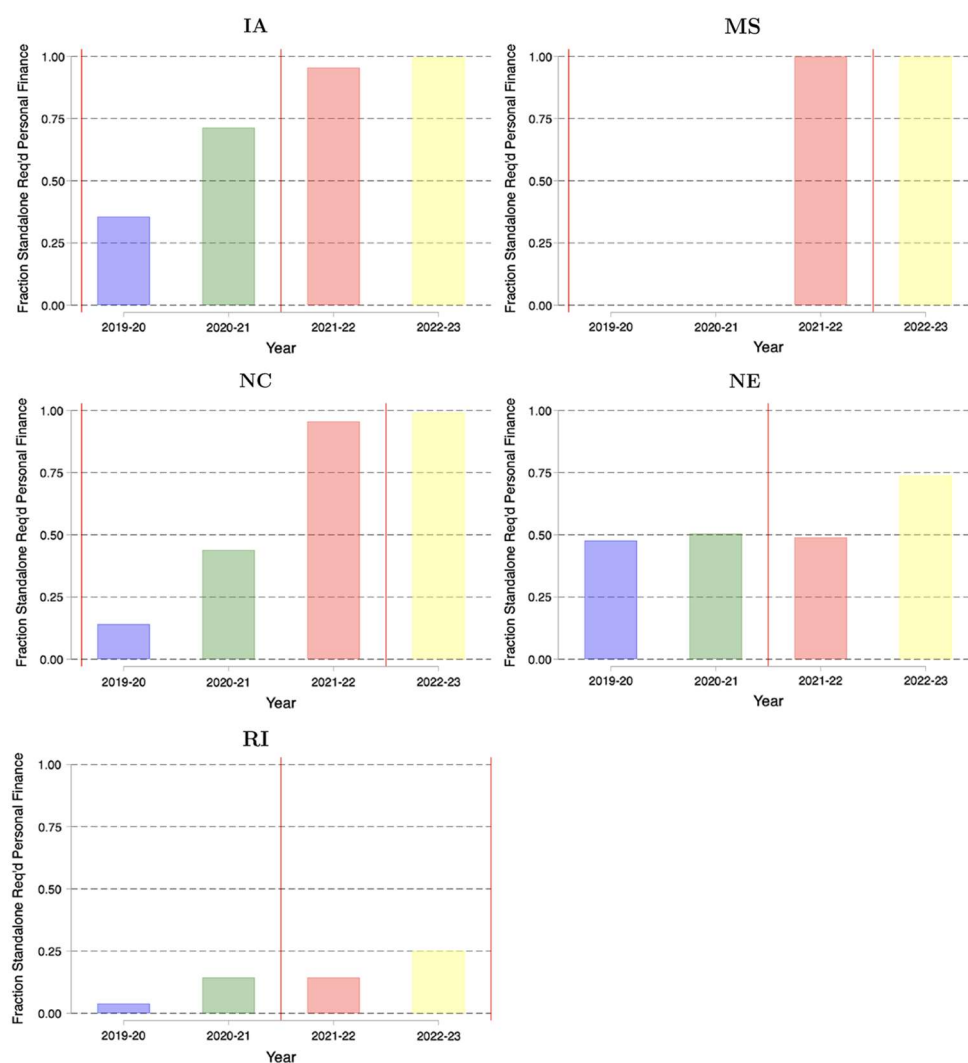


Figure 2. Luedtke, A. O., & Urban, C. (2023). High school financial education courses in the United States.: What is the importance of setting state policies? *Journal of Financial Literacy and Wellbeing*, 1(3), 431–449. doi:10.1017/flw.2024.1

Also, Luedtke and Urban (2023), in their article, detail the difference between an intent-to-treat (ITT) estimate and a treatment-on-treated (TOT) estimate. The TOT estimate is 2.5 times more effective once the lack of implementation is accounted for: an effect size of 8.25 percentage points (Luedtke & Urban, 2023). This critical discovery means that the lack of implementation among state policies could dampen the findings on PFC's effects.

A study dating back to 2001 by Tennyson and Nguyen further examines states that have put personal finance education mandates in place. They include “the study of income and its determinants, money management and budgeting, saving and investing, and credit and debt” as the topics comprising personal finance education (Tennyson & Nguyen, 2001). Comparing the states' educational requirements with students' personal finance literacy test scores, Tennyson and Nguyen analyzed data from thirty-one states, twenty of which had personal finance education policies. From those thirty-one states, 1,643 students from sixty-five schools comprised the data set, and while twenty states had some level of personal finance education policies, only sixteen states mandated personal finance education, whether that be through general education standards, specific courses, or testing. The test given to students covered topics concerning income, money management, and spending, with half of the questions being knowledge-based and the other half requiring analysis of financial events. Confirming Luedtke and Urban's findings, the results of the study revealed the presence of a state mandate for some type of personal finance education was not related to students' average test scores. Students in a state with a mandate averaged 56.9 percent of questions correct on the test, while students in a state without a mandate averaged 56.5 percent of questions correct (Tennyson & Nguyen, 2001). This marginal improvement is not statistically significant. However, Tennyson and Nguyen did discover that students in states that mandated a specific standalone course for personal finance

education averaged 59.16 percent of questions correct, which is statistically significant from students in states with no mandate (2001). These findings reveal the importance of personal finance education mandates to be more than just a test or concepts sprinkled in other classes and for the mandate of a course dedicated to teaching personal finance concepts. Tennyson and Nguyen expound on this argument: “When curriculum mandates are considered as a whole, students in mandate states did not perform significantly better than other students. However, when broken down separately, curriculum mandates that require the teaching of personal finance concepts within a specific course are significantly and positively related to student test scores” (2001). This study reveals another more sobering statistic: “Caucasian students scored significantly higher than non-Caucasian students, achieving an average score of 60.6 percent on the test, compared to 51.9 percent for non-Caucasian students” (Tennyson & Nguyen). Students from varying backgrounds have differing access to personal finance education, which bolsters the claim for personal finance courses in all schools, so every student, no matter racial, gender, or other demographic characteristics, gains equitable access to valuable financial principles.

Artificial Intelligence

Artificial intelligence (AI) has blown up in popularity and usage over the past five years. It is a relatively new technology, so users continue to expand its capabilities and find the optimal applications. Naturally, the adoption of AI grows into the personal finance space as well, which offers appealing, instant access to a wealth of data on personal finance matters. Do students need personal finance classes since they have convenient access to AI tools that can answer their personal finance questions for them? This section will aim to answer that question by evaluating the effectiveness and limitations of AI-driven personal finance advisors (robo-advisors) and students’ use of other AI-driven tools.

The adoption of robo-advisors, financial advisors powered by AI, has ramped significantly, parallel with the rise in AI use. In 2010, Betterment launched the first robo-advisor in the United States, the leading market for robo-advisors; additionally, the robo-advisor segment is expected to show an annual growth rate of 21.0% (Waliszewski & Warchlewska, 2020). A main part of the increasing use stems from robo-advisors' core competency: analyzing large quantities of data and using their findings to provide suggestions to users looking for financial advice. Pangavhane et al. (2023) found supporting evidence for the efficacy of robo-advisors in addition to improved financial literacy and effective debt management. Because of their access to millions of data points across the web or local platform, robo-advisors excel at providing general answers to questions that apply to cohorts of people, such as “What is the standard deduction for a taxpayer with a single filing status?” Furthermore, adoption of robo-advisors is on the rise (Pangavhane et al., 2023), and while some might feel scared to ask a robo-advisor about personal finance matters, users engaging with these robo-advisors show increasing levels of trust as the technology becomes more prevalent.

However, there is a range of comfortability among users; studying the attributes correlated with robo-advisor adoption is crucial to understanding how willing students will be to utilize a robo-advisor. Oehler et al. (2022) conducted a study on young adults to test what characteristics affected the participants' use of robo-advisors for investing. The participants were given the homepage of a real robo-advisor along with 1,000 theoretical euros to invest and a questionnaire designed to capture the various characteristics of these individuals. The authors chose 1,000 euros since that is a common amount of money for students to handle. 33% of the young adults used solely the robo-advisor to invest, while the rest employed a combination of investing by using the robo-advisor and using their discretion to invest. These findings indicate

that young adults are willing to use robo-advisors at some level for investing, which is a major part of personal finance. To add on to that, participants who are willing to use the robo-advisor are more willing to take financial risks and display more extroverted and optimistic characteristics (Oehler et al., 2022). In a separate article, Fulk et al. (2018) found that users of robo-advisory services generally had lower income, lower net worth, received no or less inheritance, and were less impulsive financially. Therefore, there is a range of people and characteristics when considering who will adopt AI-powered products, attempting to better their financial well-being. When framing this in the context of personal finance classes, not all students will readily embrace asking a robo-advisor to further their financial literacy and will need a personal human source, like a teacher or parent.

Shifting more broadly to a more frequent source of AI-generated content, ChatGPT, the Journal of Risk and Financial Management presents an article studying the capability of ChatGPT to provide case-specific financial advice (Schlosky et al., 2024). This study is the first of its kind to assess ChatGPT's ability in personal finance cases. The authors fed 21 cases detailing a personal finance dilemma into ChatGPT. The case topics ranged from saving for college to retirement planning to insurance needs, so they covered most of the topics commonly found in a personal finance course. As a result of this study, Schlosky et al. (2024) presented the major disadvantages of using ChatGPT for financial advice; among those were giving generic recommendations, improperly solving mathematical problems, ignoring the psychology of financial planning, and overlooking important tax and legal details. On the flip side, the advantages of ChatGPT were the no-cost financial advice and 24/7 access, as opposed to a traditional financial advisor or personal finance course. An evaluation of both the strengths and weaknesses of ChatGPT results in a sentiment that the AI chatbot excels in basic, broad advice,

but it can often miss key pieces of effective financial advice, like empathy and a holistic view. Schlosky et al. (2024) concluded that ChatGPT can serve as a starting point in giving and finding financial advice, which should be critically thought through before accepting. Lastly, the study also mentions the implications for teachers of personal finance courses: “Teachers at all levels can use the cases, responses from ChatGPT to them, and our analyses in this paper to enhance the content of their courses” (Schlosky et al., 2024). While students might struggle to receive sound, personalized advice from these AI tools, teachers should incorporate AI models into their workflow. Since teachers can screen through what the model produces, this provides a much higher level of assurance that students receive credible financial advice instead of generating responses on their own and blindly accepting the output.

A thorough analysis of a variety of studies touching on the use of AI in the personal finance space shows that while Artificial Intelligence is a powerful tool and demonstrates its promise in providing general financial advice, it should not be solely relied on as students’ primary source of financial education. Thus, AI should not replace personal finance courses but instead, supplement them by assisting the teachers of these courses.

Conclusion

The purpose of this literature review is to increase the awareness and understanding of the long-term impact of personal finance courses being offered in high schools and colleges and provide compelling evidence for the inclusion of personal finance courses while students are in their late teenage years and entering adulthood. Personal finance courses provide a wide array of positive benefits for the students that take them, namely better debt management, an increased likelihood of graduating college, and healthier spending habits. A surprising result from this review is the disparity in financial literacy between Caucasian and non-Caucasian students,

which poses the need for personal finance courses, primarily in non-Caucasian communities. Additionally, there are meaningful spillover effects on the parents of the students in PFCs: a lower default probability and increased credit scores. This was especially apparent in lower socioeconomic households. As personal finance education mandates continue to grow among states, it is imperative that these mandates include personal finance courses and not just add-on content or tests. If not, states risk the effectiveness of the mandates when translated to school implementation. Lastly, as young adults show growing signs of artificial intelligence (AI) adoption, AI should not replace a standalone personal finance class or be used as a student's primary source of financial literacy. Instead, teachers can utilize AI in their classrooms and expound on the outputs of AI models. The conclusions of this thesis emphasize the significance and benefits of students completing a dedicated personal finance course in high school or college while also highlighting the challenges associated with its implementation.

Acknowledgments

My love for personal finance has been a journey of discovery and exploration that has developed through high school and college, with much credit being owed to many influential people along the way. First, my sincere gratitude goes to my faculty mentor, Professor Hong Qian, whose insight and unique perspective challenged me to explore emerging topics, like Artificial Intelligence, and aided me in the refinement of this thesis. Next, I extend my appreciation to my high school personal finance teacher, Tammy Barrett. It was in that class that I found my passion for personal finance and experienced the profound benefits of financial education early on in life. Because of Mrs. Barrett's care and clarity, I will now work as a Financial Advisor, helping provide the same clarity to others' financial lives.

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This thesis is a culmination of the many influences on my life and a significant milestone in my academic path. While some might see it as an end to my undergraduate journey, this piece of literature acts as a catalyst at the onset of my professional career, and I will carry with me the same desire to research, analyze, and educate others about personal finance.

References | Citation Style: APA 7th Edition

- Eichelberger, B., Gerbing, D., & Gillpatrick, T. (2019). Financial Education, College Retention, and Graduation Rates. *College Student Journal*, 53(4), 479–489.
- Frisancho, V. (2023). Is School-Based Financial Education Effective? Immediate and Long-Lasting Impacts on High School Students. *Economic Journal*, 133(651), 1147–1180. <https://doi.org/10.1093/ej/ueac084>
- Frisancho, V. (2023). Spillover effects of financial education: The impact of school-based programs on parents. *Journal of Financial Literacy and Wellbeing*, 1(1), 138–153. <https://doi.org/10.1017/flw.2023.2>
- Fulk, M., Grable, J. E., C. F. P., Watkins, K., & Kruger, M. (2018). Who uses robo-advisory services, and who does not? *Financial Services Review*, 27(2), 173–188. <https://doi.org/10.61190/fsr.v27i2>
- Gerrans, P., Heaney, R., & Smith, T. (2019). The impact of undergraduate personal finance education on individual financial literacy, attitudes and intentions. *Accounting & Finance*, 59(1), 177–217. <https://doi.org/10.1111/acfi.12247>
- Harvey, M. (2019). Impact of Financial Education Mandates on Younger Consumers' Use of Alternative Financial Services. *Journal of Consumer Affairs*, 53(3), 731–769. <https://doi.org/10.1111/joca.12242>
- Luedtke, A. O., & Urban, C. (2023). High school financial education courses in the United States.: What is the importance of setting state policies? *Journal of Financial Literacy and Wellbeing*, 1(3), 431–449. <https://doi.org/10.1017/flw.2024.1>
- Mangrum, D. (2022). Personal finance education mandates and student loan repayment. *Journal of Financial Economics*, 146(1), 1–26. <https://doi.org/10.1016/j.jfineco.2022.06.006>

Next Gen Personal Finance. (2023, March 1). *NGPF'S 2022 ANNUAL REPORT*. NGPF.

<https://www.ngpf.org/state-of-fin-ed-report-2021-2022/>

Oehler, A., Horn, M., & Wendt, S. (2022). Investor Characteristics and their Impact on the Decision to use a Robo-advisor. *Journal of Financial Services Research*, 62(1–2), 91–125.

<https://doi.org/10.1007/s10693-021-00367-8>

Pangavhane, P., Kolse, S., Avhad, P., Gadekar, T., Darwante, N.K., & Chaudhari, S.V. (2023). Transforming Finance Through Automation Using AI-Driven Personal Finance Advisors. *2023 4th International Conference on Computation, Automation and Knowledge Management (ICCAKM)*, 1–5, <https://doi.org/10.1109/ICCAKM58659.2023.10449538>

Rafinda, A. (2022). The Most Suitable Topic of Personal Finance Education University Students: Study Case in Indonesia. *Quality - Access to Success*, 23(190), 129–137.

<https://doi.org/10.47750/QAS/23.190.15>

Schlosky, M. T. T., Karadas, S., & Raskie, S. (2024). ChatGPT, Help! I Am in Financial Trouble. *Journal of Risk and Financial Management*, 17(6), 241.

<https://doi.org/10.3390/jrfm17060241>

Tennyson, S., & Nguyen, C. (2001). State Curriculum Mandates and Student Knowledge of Personal Finance. *Journal of Consumer Affairs*, 35(2), 241–262.

<https://doi.org/10.1111/j.1745-6606.2001.tb00112.x>

Waliszewski, K., & Warchlewska, A. (2020). Financial Technologies in Personal Financial Planning: Robo-Advice Vs. Human-Advice. *Ruch Prawniczy, Ekonomiczny i Socjologiczny (0035-9629)*, 82(4), 303–317. <https://doi.org/10.14746/rpeis.2020.82.4.22>