Assessing the Effectiveness of Financial Education Course Formats in Washington State

Findings from a Mixed-Methods Study of Instructional Models in Middle and High Schools

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Executive summary

Financial literacy has been shown to have a positive impact on a wide range of financial behavior, from retirement planning and savings to loan repayment and credit scores, yet access to high-quality instruction remains uneven across Washington classrooms, and lags behind access levels of other states. Policymakers continue to debate how best to expand access, with one question often the center of debate: should personal finance be taught in a dedicated, standalone course, or embedded within existing subjects? Recent proposals in the 2025 legislative session (Senate Bill 5080 and House Bill 1285) highlight the need for evidence that clarifies the tradeoffs and best practices across course formats in order to deliver the greatest student benefit and advance educational equity.

To address this evidence gap, the Center for Economic and Financial Education (CEFE) at Western Washington University and the Washington Council for Economic and Financial Education (WACEFE) conducted a mixed-methods study comparing standalone and embedded course format approaches to teaching financial education in Washington middle and high schools. The study examined how each format influences student knowledge, educator practice, and overall program quality.

Why this matters now

American households face growing financial strain with record debt levels, stagnant wages, and rising costs for housing, health care, and education. Total household debt reached a record high 18.2 trillion dollars in the first quarter of 2025, with credit card balances above 1.1 trillion dollars (New York Fed, 2025). Financial literacy cannot eliminate these pressures, but it can help individuals make better choices within their constraints. Understanding budgeting, credit, and interest rates empowers people to manage debt more effectively and avoid costly pitfalls.

At the same time, the decline of traditional pensions has shifted the responsibility of retirement planning to individuals. This shift places a significant burden on people to understand investment vehicles, risk tolerance, compound interest, and long-term financial planning - topics that are not always taught in schools. According to a recent report by the Federal Reserve, only 35% of Americans say their retirement savings are on track (Board of Governors, 2024).

Retirement and saving have also become harder to navigate as financial products have grown in complexity. From investment apps and cryptocurrency to buy-now-pay-later services and robo-advisors, today's consumers must understand nuanced financial principles to make sound financial decisions and identify scams and high-risk products. In a rapidly evolving landscape, a lack of financial knowledge comes at increasing costs: according to a 2022 study, people with low financial literacy were significantly more likely to engage in expensive credit behaviors and fall victim to financial fraud (Lin et al, 2022).

Washington legislators have repeatedly introduced bills to make financial education a

Study at a glance

- **Research focus:** Compare the efficacy of standalone and embedded financial education course formats at building student financial literacy and supporting equitable access.
- **Sample:** Thirty-nine Washington educators from 30 schools in 25 school districts participated, with nearly 1,600 of their students completing knowledge and experience surveys.
- **Data instruments:** Student financial knowledge is measured with a 15-item questionnaire covering six key competencies aligned with Washington State Financial Education K-12 Learning Standards. These questions include the commonly used "Big Three" and "Big Five" questions, a rigorously validated battery that underpins large national and international surveys. Educator interviews and surveys, along with student surveys, capture instructional context, preparation, and perceived effectiveness.

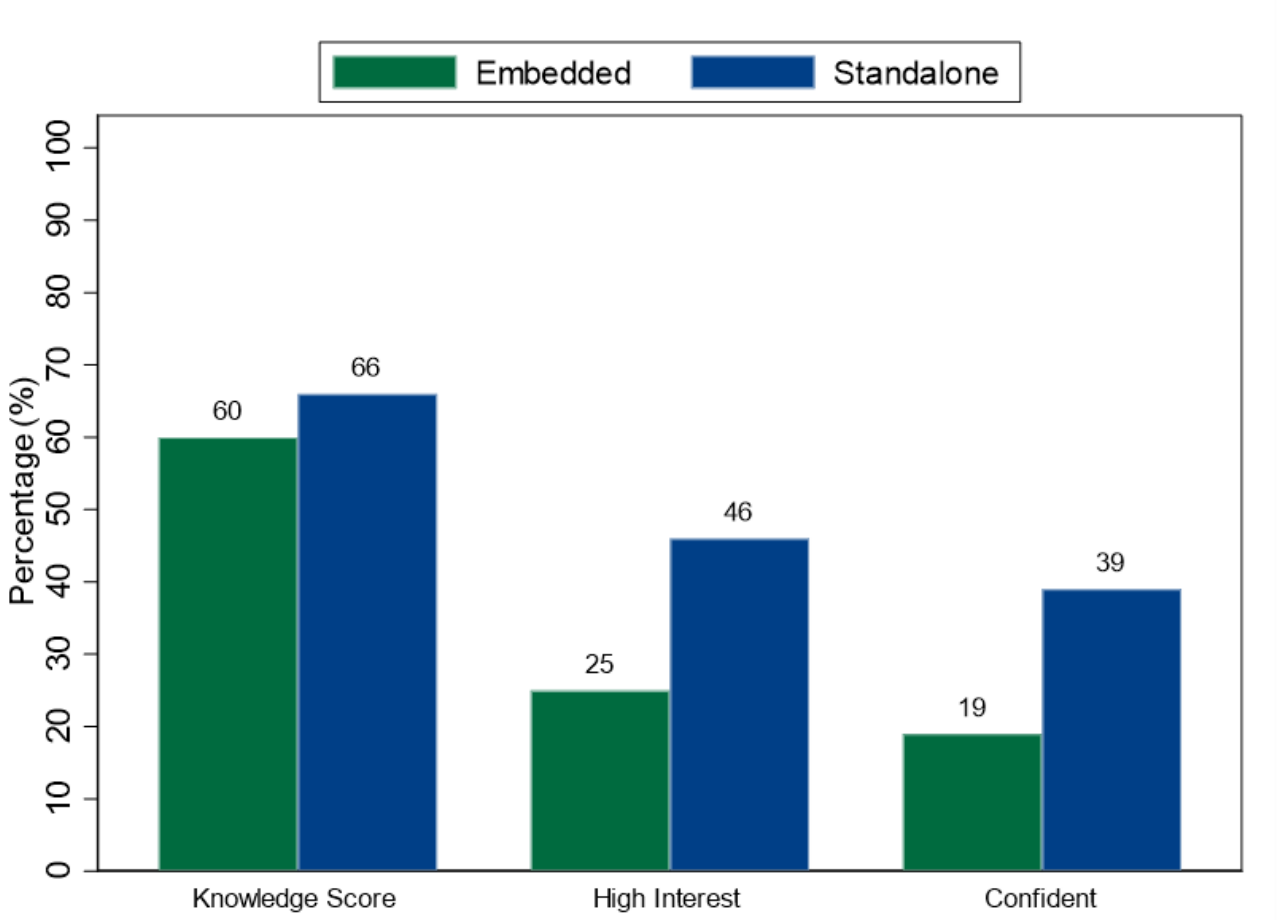
graduation requirement, most recently House Bill 1285 and Senate Bill 5080 in 2025. Although neither measure advanced, the proposals, together with the State Board of Education's FutureReady task force's review on state graduation requirements and whether to include personal finance, signal sustained interest in improving student financial literacy. Washington-specific evidence on instructional models, educator preparation, and student outcomes can help guide these policy discussions.

Research indicates that well-designed financial literacy instruction improves real-world financial behavior. Students exposed to financial education are more likely to complete federal aid applications, are less likely to carry credit card balances, and hold less private loan debt (Stoddard & Urban, 2020). State mandates to require financial education in high school have been linked to higher credit scores, lower delinquency rates, and reduced non-student debt burdens (Brown et al, 2016; Urban et al, 2020). This study contributes new data from Washington State classrooms to inform efforts to scale effective, high-quality financial education statewide.

Key findings

As demonstrated in Figure 1, students in standalone financial education courses score about six percentage points higher on the knowledge assessment, are 21 percentage points more likely to report that they found their financial education class to be "very interesting", and are 20 percentage points more likely to say they are "a lot" more confident in making money decisions.

Figure 1. Key Student Outcomes, by Course Format



Notes: The sample includes information on 1,588 students in 43 classes taught by 37 educators in 28 schools across the State of Washington.

Other key findings across each section of the report include the following:

1. **The standalone-embedded knowledge gap is explained by teacher experience and instructional time:** When educator financial education experience and contact hours are held constant, knowledge scores in embedded courses are no different than in standalone courses.
2. **Interest and confidence gaps persist:** Even after controlling for a wide range of variables, standalone courses still elicit more student interest and confidence than embedded courses.
3. **There are different drivers of student success across formats:** In embedded settings, more educator experience with financial education and contact hours dedicated to financial content predict greater financial literacy. In standalone courses, these factors show no added effect.
4. **Contact-hour minimums matter in embedded courses:** Knowledge gains in embedded classes appear once instruction reaches about 30 contact hours and increase with additional time.

5. **Contact hours allow for depth of content coverage:** Standalone courses with ample contact hours support applied projects, iterative skill-building, and real-world topic exploration; embedded courses with limited time often deliver only abbreviated topic coverage or skip key competencies altogether.
6. **Educator expertise promotes efficacy:** Educators with finance backgrounds or sustained professional development show stronger content fluency and can tailor lessons, while those without training rely on inherited materials and struggle with foundational concepts.
7. **Relevant content drives student engagement:** Student interest grows when content feels personally relevant. Topics like taxes, credit, and investing resonate when linked to real-life experiences, and project-based learning or guest speakers further boost participation.
8. **Prior financial socialization matters for instruction and learning:** Students enter with varying familiarity and confidence with personal finance; gaps in exposure, numeracy, language, or stability can compound barriers to learning, prompting educators to adapt instruction. Students with previous financial education and interest in money demonstrate greater financial literacy.
9. **Modality and technology aid instruction:** Simulations, budgeting apps, and other digital tools enhance realism and interaction when integrated into curriculum, but uneven infrastructure and inconsistent implementation can limit their reach.

Recommendations

The following recommendations highlight priority actions derived from the study's quantitative and qualitative findings and are offered for consideration as Washington refines its approach to personal finance instruction. The research team offers these evidence-based recommendations with trust in educators, policymakers, and partners to interpret and apply them thoughtfully, with attention to local context, equity, and care.

Instructional content & delivery

- When resources allow, offer standalone financial education courses.
- When using embedded course delivery, ensure a minimum number of contact hours (at least 30-60 recommended) dedicated to financial education.
- Use active learning tools, simulations, digital apps, case studies, and projects that mirror real-life decisions, but link each activity to a clear learning target, confirm every student can access the technology, and close with debriefs on common pitfalls so confidence gains translate into sound judgment.
- Frame lessons with scenarios that align with students' lived experiences, such as first jobs and used car ownership.
- Schools and educators should cultivate cross-sector partnerships to provide experiential learning to students and industry expertise for educators.

Educator capacity & supports

- Provide targeted professional development for new financial education educators, whether teaching embedded or standalone, and include a budget for substitute coverage or stipends so that educators can attend professional development training and events.
- Establish mentorship structures that pair less-experienced financial education educators with veteran colleagues.
- Create space for reflective teaching practices by offering educators a voluntary, open-ended conversation each year about their instructional approach.
- Continue to support the Washington Financial Education Public-Private Partnership (FEPPP) to ensure it can effectively vet curricula, expand professional learning opportunities for educators, and provide classroom support as the state advances toward making financial education a graduation requirement.
- Develop and fund participation in on-demand, standards-aligned, micro-credential modules (5-10 hours each) in core personal finance topics such as budgeting, credit, investing, risk, post-secondary planning; award clock hours so educators in any subject area can build content strength at their own pace. This intervention is particularly critical for new educators teaching financial education in the embedded course format.

Student access & equity

- Provide differentiated materials and support for multilingual learners, students with disabilities, those with less strong math skills, and those with limited technology access.
- Introduce foundational personal finance topics in upper-elementary or middle school to standardize early exposure.
- Audit participation and outcome data, especially if courses are optional, in order to assess and address disparities.
- Offer professional learning on trauma-informed facilitation, helping educators handle sensitive money topics that may surface as students explore personal finance.
- Establish financial education resources that have been audited with an equity lens; when framing lessons with scenarios that align with students' lived experiences, pay special attention to students of diverse backgrounds.

Systems & policy enablers

- Publish and disseminate a recommended scope-and-sequence template to reduce duplication and close content gaps reported by educators, especially for embedded courses.
- Allocate dedicated funding for curriculum adoption, professional learning, and classroom resources.
- Implement financial education curriculum before high school to build foundational knowledge prior to high school in order to increase confidence, interest, and knowledge outcomes.

- Create a test-only endorsement pathway for personal finance, phased in with certification requirements to build educators' financial expertise, and subsidize or host regional centers and online prep so that rural and low-capacity districts can upskill staff, reducing the risk that certification pathways concentrate expertise in wealthier areas.

Acting on these priorities will position districts, educators, and policy leaders to advance consistent, high-quality financial education and monitor progress toward equitable student outcomes across the state.

Background

This section provides context for the study, including key definitions, theoretical frameworks, policy developments, and curricular approaches relevant to K–12 financial education. It also highlights the broader rationale for financial education, national and state policy trends, and examples of implementation across schools and systems.

Key terms & definitions

For the purposes of this study, the researchers use consistent definitions for key terms commonly referenced in financial education. Clear and shared terminology ensures that data collection, analysis, and recommendations remain aligned and actionable across stakeholder groups. These definitions also inform the design of survey tools, interview protocols, and the coding of qualitative and quantitative data.

Financial education

Refers to structured efforts to build essential life skills related to managing money. This includes topics such as budgeting, saving, debt management, investing, and retirement planning. Financial education aims to support individuals in making informed financial decisions, enhancing both short-term choices and long-term economic stability. In K–12 settings, financial education may be delivered in various formats, with the overarching aim of preparing students for real-world financial responsibilities and decision-making.

Financial literacy

The outcome of financial education: the ability to understand and apply economic and financial concepts in everyday life. This includes the ability to process economic information and make informed decisions about financial planning, wealth accumulation, debt, and pensions, reflecting both knowledge and behavior (Oldham Luedtke and Urban, 2023).

Standalone (financial education) course

A single-subject course offering a focused curriculum aimed at equipping students with key financial skills and preparing them for financial independence.

Embedded (financial education) course

Describes financial education that occurs within a broader subject area, such as economics or math, or within a broader instructional context, such as advisory periods. This category also includes courses where financial education comprises less than 75% of total educator contact hours.

Big Three & Big Five

Originally devised by Annamaria Lusardi and Olivia S. Mitchell, the “Big Three” questions, covering compound interest, inflation, and risk diversification, have become the backbone of comparative financial literacy surveys, now fielded in more than 140 countries (Todhunter-Reid et al. 2020). The “Big Three” questions are simple, but generate accurate predictions of basic financial knowledge levels; they have been shown to be an “extremely good measure of peoples’ understanding of basic financial concepts (Lusardi and Mitchell, 2023).”

Expanded with numeracy and bond-price items to form the “Big Five,” this five-item questionnaire is used in the U.S. National Financial Capability Study (approximately 25,000 adults per wave) and the S&P Global FinLit Survey (150,000 adults in 140 countries). It also appears in panels such as the National Longitudinal Survey of Youth, RAND American Life Panel, and Understanding America Study. Psychometric work finds the items exhibit sound construct validity, temporal stability, and predictive power for later financial behaviors (Lusardi and Mitchell, 2023).

The student assessment in this study incorporates the full “Big Five,” placing the study within the global corpus of financial literacy research. Because these items have been administered to hundreds of thousands of respondents worldwide, they provide a rigorously validated benchmark for fundamental financial knowledge. Their widespread use by academic, governmental, and international studies enables direct comparison with established national and international datasets and strengthens the assessment’s external validity.

Need for financial education

The following section outlines the growing need for financial education, drawing on research that links financial literacy to financial behavior.

Changing financial landscape

Students increasingly face more complex economic decisions earlier in life, and young people across the US are in more debt than ever before, linked to student loans, medical debt, credit cards, and auto and retail loans (Urban Institute, 2024). Young people are also navigating the world with increasingly prevalent securities-trading platforms full of unproven AI stocks, crypto marketplaces, as well as online sports betting and gambling proliferation. Early exposure to financial concepts can help them navigate complex financial decisions with greater preparedness.

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Financial education and economic stability

The need for financial education, and the consequences of its absence, are increasingly supported by research connecting financial literacy to both individual and societal outcomes. Higher levels of financial literacy education are strongly associated with increased economic stability (Lusardi and Mitchell, 2014) and may help reduce reliance on public assistance programs (Levin, 2009). Additionally, financially-educated individuals can transfer their knowledge and its benefits to other community members, generating positive externalities through a social multiplier of financial knowledge (Haliassos et al., 2020).

Financial literacy and household outcomes

A 2022 financial literacy survey conducted by George Washington University found that the average respondent answered 50% of the questions correctly. Twenty-three percent of respondents answered 25% or less of the questions correctly. Lower scores on this survey were associated with higher debt levels, lack of savings, or other financial difficulties, demonstrating a correlation between financial education and economic well-being (NEA, 2024). Research conducted by financial literacy expert Annamaria Lusardi and coauthors has also found that each additional correct answer on the "Big Three" survey is associated with higher net wealth, higher financial wealth, and more nonfinancial wealth (Lusardi and Mitchell, 2023). Lusardi also finds that "people with higher financial literacy have more wealth not just because they are able to plan and save more but also because they get better returns on their savings, even via basic financial instruments" (Kaiser and Lusardi, 2024).

Financial literacy and long-term financial security

Research finds strong evidence of financial literacy's correlation with stock market participation, portfolio diversification, portfolio returns, and before retirement savings and that 30-40 percent of wealth inequality near retirement is accounted for by disparities in financial literacy (Kaiser and Lusardi, 2024; Lusardi and Mitchell, 2023). Additionally, financial education is associated with increased knowledge of saving and investing practices, which may contribute to reduced financial insecurity and other negative externalities associated with weaker economies. Individuals with lower levels of financial literacy "face higher costs of borrowing, report concerns about excessive debt, or have difficulty assessing their debt situations and carry debt into retirement" (Kaiser and Lusardi, 2024).

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Disparities in financial literacy by race and education

Non-white individuals score about 0.19 standard deviation (SD) units, or approximately 5-7%, lower than white individuals in financial literacy, and those without a college degree score about 0.23 SD units, or approximately 7-11%, lower than those with a college education

(Kaiser and Lusardi, 2024). A recent study shows that less than 8% of black households and 24% of white households reported owning stock or mutual funds (St. Louis Fed, 2022).

The National Education Association (NEA) highlights the impacts of personal finance education, endorsing the National Standards for Personal Financial Education, which address key financial topics and economic inequities. Additionally, research by the Cleveland Federal Reserve Bank emphasized closing the racial income gap to tackle the racial wealth gap, advocating for educational reforms to reflect historical disparities and encourage critical thinking (Alipranis and Caroll, 2019).

Financial literacy, financial confidence, and understanding financial risk

Recent research highlights the complex interplay between financial literacy, confidence, and risk-related behavior. Studies show that both objective and subjective financial literacy have a strong impact on reducing overly risky credit behaviors and investment practices (Liu and Zhang, 2021; Mudzingiri, 2024). Confidence plays a nuanced role in financial behavior: while subjective overconfidence increases market participation, it also raises susceptibility to fraud and debt, whereas subjective underconfidence leads to more conservative but sometimes suboptimal financial choices. Bridging the gap between subjective and objective financial literacy can support healthier financial risk-taking and more accurate assessments of financial risk (Mudzingiri, 2024). Closely related is financial self-efficacy—one's belief in their ability to manage finances—which reinforces confidence in financial knowledge and is positively linked to overall financial well-being (Hu et al., 2021; Suade et al., 2024). Together, these findings suggest that supporting both subjective and objective financial literacy—especially when paired with appropriate levels of confidence and self-efficacy—plays a critical role in promoting sound financial decision-making and reducing harmful risk-taking behaviors.

Learning theories and financial education

While a large body of research demonstrates the general effects of financial education, understanding how best to teach it is crucial to its impact. Improving outcomes requires not just expanding access to education, but aligning instruction with best practices. Effective financial education must consider how students learn, process, and apply new information to support meaningful learning.

Several core learning theories provide a foundation for instructional design in financial education. These theories offer insight into the pedagogical approaches that make these Several core learning theories provide a foundation for instructional design in financial education. These theories offer insight into the pedagogical approaches that make these curricula engaging, relevant, and help explain the conditions under which students are most likely to connect with content, retain knowledge, and apply financial concepts to real-life situations.

Interest and autonomous motivation

Interest is a powerful motivational force that plays a central role in energizing learning, guiding career and academic pathways, and fostering long-term engagement. Defined both as a psychological state of focused attention and affect, and as a lasting inclination to re-engage with a topic over time, interest supports deeper and more sustained learning outcomes. The four-phase model of interest development outlines key interventions to promote and maintain interest, including attention-getting environments, connections to prior interests, problem-based learning, and increasing the perceived utility of the material (Harackiewicz et al., 2016).

In the context of financial learning, interest becomes especially important given the growing recognition that financial knowledge and sound decision-making are essential for personal and societal well-being. Drawing from Self-Determination Theory, research shows that individuals with autonomous (self-driven) motivation toward financial management—closely related to personal interest—demonstrate stronger financial self-efficacy, greater well-being, and healthier financial behaviors, such as saving and investing. In contrast, those with low intrinsic motivation report poorer financial outcomes, including overspending and reduced confidence (Di Domenico et al., 2022). These findings suggest that financial education efforts may be more effective when they foster meaningful interest and autonomy, not just knowledge acquisition.

Constructivism

Emphasizes that learners construct new knowledge by building upon their existing knowledge. It acknowledges that learning is a social and personal process where understanding grows as students connect new concepts to what they already know. Constructivism highlights the importance of establishing a solid foundation of familiar ideas. It argues that learners must experience the world and reflect on these experiences, building representations and incorporating new information into their existing knowledge (National University, 2023; University of Buffalo, 2024).

Application: Within financial education, constructivism involves helping students relate financial concepts—such as money management, investing, debt, and the stock market—to their own personal experiences and prior knowledge. This connection makes learning more meaningful and accessible.

Contextual learning

Emphasizes the importance of teaching academic concepts through real-world applications that reflect students' lived experiences. This concept is based on the theory that students are more motivated and retain information better when they understand how it applies to their personal, social, or occupational lives. Contextual learning strategies embed content in meaningful situations such as workplace simulations, case studies, or community-based problems, encouraging students to apply knowledge in context rather than memorize it in abstraction (Berns and Erickson, 2001).

Application: To contextualize financial education, a concept often seen as unapproachable, educators can use local examples in students' lives. Students might create a budget based on

their real paycheck or evaluate the financial trade offs involved in buying their first car. Contextual learning may be achieved by catering to the background of students and achieving understanding of these key concepts regardless of the level of background knowledge (Rapunzl, 2025).

Experiential learning

Outlines the most impactful educational methods as those in which knowledge is gained through the transformation of experiences. This theory advocates for knowledge building by doing, as opposed to transferring knowledge, and basing these educational experiences within the student's world and lived experience. A curriculum intent on incorporating experiential learning would engage students as the facilitator, encouraging discussion of these lived experiences and incorporating increasingly complex exercises (doing) to practice these learnings.

Application: In the context of financial education, project or simulation based learning allows adaptation of material onto experiential activities. Real-life scenarios such as stock market simulations or budget planning practice could help to accomplish these goals, with reflection and discussion following participation to highlight teachable decisions and outcomes.

Social learning

Proposes that social factors shape learning. The theory argues that an individual's knowledge is influenced by the environment and social networks that they reside within. This theory emphasizes the strong link between the behaviors seen within social networks and the behaviors that are subsequently practiced by those inside the network. This connection supports the higher financial literacy of individuals who are exposed to financial education at home, as well as a link between financial knowledge and social learning opportunities that is supported by empirical evidence (Rehman and Mia, 2024).

Application: Peer-led workshops or mentorship programs could help reinforce positive financial behavior and accelerate financial education through social learning. Students learn from mentors and from each other within these contexts, with discussions and group activities reinforcing important take-aways. Generating a community of learning is key to fully utilizing the gains from this approach.

Broader context

These learning theories offer important guidance for designing financial education that is engaging, relevant, and developmentally appropriate. However, instructional quality is also shaped by the broader policy environment in which financial education takes place. State mandates, graduation requirements, and course delivery models all influence what is taught, who receives instruction, and how consistently programs are implemented. The following section outlines the national policy landscape that frames these decisions across the United States.

Public policy landscape

In response to growing recognition of the social and economic value of financial literacy, states across the U.S. have taken varied legislative approaches to expand financial education in high schools. These efforts include graduation requirements, course mandates, and statewide standards, with states choosing between standalone courses, embedded instruction, or hybrid models. This section outlines the national policy landscape as of 2025, highlighting key state examples, policy mechanisms, and their potential impact on equitable access and implementation.

Forms of financial education: standalone vs. embedded

Financial education as part of a K-12 curriculum is commonly presented either in a standalone format, usually as a dedicated personal finance or financial literacy course, or in an embedded format, as a unit or section of a course distinct from financial literacy. Courses that commonly integrate financial literacy material include mathematics, career and technical education (CTE), economics, driver's education, and history.

Standalone course legislation

As of 2025, 29 states have passed legislation requiring completion of a standalone personal finance course as a high school graduation requirement (NGPF, 2025b).

Utah was the first state to implement a standalone financial literacy course as a graduation requirement in 2004, mandating the completion of a one-semester course titled "General Financial Literacy." A 2018 review of Utah's financial literacy program found that students who completed the general financial literacy requirement have higher levels of personal financial knowledge and make better behavioral choices than those who did not (Oaks, 2022).

North Carolina adopted a similar model in 2019, implementing a full-credit, year-long economics and personal finance course. Although the course is within the state's social studies curriculum, it follows a standalone structure with dedicated content and standards. The state also established a financial literacy council to support coordinated statewide delivery (APEF, 2025; North Carolina General Assembly, 2023).

Embedded course legislation

Eight states have developed financial literacy graduation requirements and standards without requiring students to take a stand-alone course. In these instances, financial education is often embedded into existing courses like economics or social studies.

For example, New York does not require a standalone financial education course but mandates that students take a one-half credit economics course that includes some financial literacy concepts, one-quarter of the 16 total concepts taught in this course (Champlain College Center for Financial Literacy, 2023c). Illinois regulations require high school students to receive 37.5 hours of financial education by the time they graduate, but does not distinguish between

embedded or standalone education (Champlain College Center for Financial Literacy, 2023a).

These embedded approaches often aim to broaden access by integrating financial topics into required coursework but may result in less consistent or in-depth instruction.

Hybrid & flexible models

Some states use hybrid approaches that give districts flexibility in curriculum delivery. Missouri allows students to meet graduation requirements through either a variety of standalone half-year electives or an equivalent embedded course (Champlain College Center for Financial Literacy, 2023b). This flexibility supports local decision-making but may lead to variability in instructional depth and alignment with standards.

Washington state policy

There have been several attempts in Washington State to pass a financial education high school graduation requirement in recent year, most recently in 2025 Senate Bill 5080 and House Bill 1285 (Washington State Legislature, 2025a, 2025b). These pieces of legislation aim to ensure that every school district provides financial education by the school years 2029–30 and 2027–28 respectively, and that students take one of these classes in order to graduate. These bills do not specify whether financial content should be standalone or embedded in other courses but would require all students to be educated in accordance with state requirements. In the implementation of current versions of SB 5080 and HB 1285, the Washington State Board of Education is directed to consult with the Financial Education Public-Private Partnership (FEPPP) to determine the most effective methods for teaching financial literacy and create a statewide implementation plan.

Impact of different policy approaches

State mandates and graduation requirements are a significant factor influencing access and consistency in financial education delivery. Research and implementation data suggest that students in schools with state-level graduation requirements are more likely to receive consistent financial education, particularly when standalone courses are required (NGPF, 2025a).

In schools with higher proportions of non-white students, schools tend to have less access to financial education courses, especially when state mandates were not implemented. Some policy advocates view graduation requirements as critical to promoting more equitable access to financial education, as states with graduation requirements have the highest levels of course adoption at the local level. When standalone courses are mandated at the state level, state requirements are also followed more closely at the local level compared to embedded course requirements (Luedtke and Urban, 2023).

Student Participation

Standalone courses consist of a dedicated curriculum and offer more in-depth exploration of key personal finance topics, where embedded courses often incorporate these key topics into broader courses. As of 2025, 30% of U.S. students are required to take a standalone personal

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finance course, 28% of students attend schools where personal finance material is embedded in another course, and 37% of students have access to a standalone personal finance course as an elective (NGPF, 2025).

Implementation Considerations
Standalone courses often have more comprehensive and focused instruction, as they are intended to educate students specifically on personal finance topics. As a result, they may have a more measurable impact on financial outcomes. These courses may be easier for some districts to implement than alternatives, as ensuring a standardized implementation of a single part of an embedded course may be difficult.

Flexibility and limitations of embedded approaches
Standalone courses often require additional instructional time and resources to implement. Embedded courses may be easier for school districts to implement, as financial education topics can be embedded into existing courses. Without specific system-wide standalone financial education requirements, these embedded courses could bring financial education to more students if they are embedded within commonly required courses such as math.

Standardizing and regulating embedded courses may present challenges, given their integration into broader course structures. It may also be difficult to monitor the impact of embedded financial education due to fragmented delivery. Financial education courses help generate skills that can be applied and learned in other subjects such as CTE, health, social studies, and even traffic safety. Understanding financial concepts may support connections to other subjects, especially when applied to relevant real-life scenarios.

Emerging curricular trends

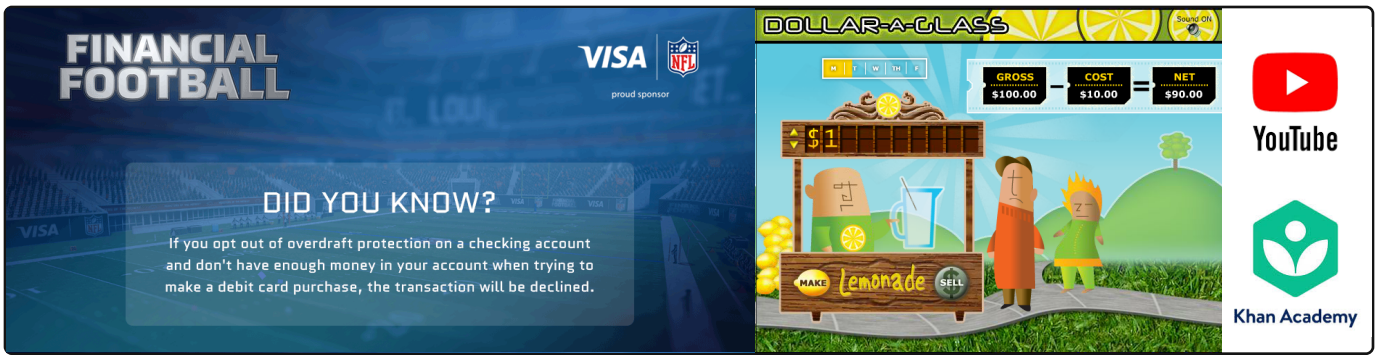
Across both standalone and embedded courses, new trends are emerging in financial education. Schools are beginning to innovate by incorporating topics that students show increased interest in, as well as utilizing technology to provide interactive learning opportunities.

One example is Financial Football (an interactive football-themed financial literacy game. This game combines a common student interest—sports—with an interactive technology-based learning experience intended to educate and engage students in financial literacy through gamification (Practical Money Skills, 2024).

These types of interactive games are designed to increase student engagement and broaden access across age groups. They may also allow for more effective implementation of the theoretical learning foundations discussed previously, creating more relatability, motivation,

and interest for students.

A number of open-access financial education services also exist; interactive websites comparable to the gamified services discussed prior (e.g. Banzai, Next Gen Personal Finance Arcade, FDIC Money Smart, Bizkids), along with other online resources such as Khan Academy and YouTube provide free and open access to financial education curriculum, expanding access to personal financial education content beyond K–12 audiences.



Implementation case studies

Several organizations have implemented K-12 financial literacy curriculum, using both standalone and embedded curriculum formats. While both standalone and embedded approaches have been used to accommodate individual sets of circumstances, resources, and instructional mediums, there remain important differences with regards to implementation. These case studies help to illuminate the differences and similarities between the two approaches and highlight consistencies across examples of effective implementation of financial education materials.

Standalone curriculum case study: Next Gen Personal Finance

Next Gen Personal Finance (NGPF) is a nonprofit organization committed to improving financial literacy among high school students by providing high-quality standalone financial education resources.

Curriculum and resources

NGPF provides a comprehensive set of curriculum materials covering over 15 units of personal finance content. Course formats are available for middle school, financial algebra, and high school in trimester, semester, or full-year options), allowing alignment with a variety of instructional needs. While NGPF's preferred implementation is a dedicated, standalone personal finance course, every lesson, unit, and activity is published under an open license, so educators routinely incorporate single modules or curated sets of lessons into economics, math, CTE, or advisory courses (NGPF, 2025c; NGPF, 2025d).

The NGPF curriculum includes a broad range of topics and is designed to be adaptable to different classroom contexts. It covers a wide range of personal finance topics, can be adapted by educators to fit specific classroom needs, is regularly updated to reflect changes in the financial landscape, and is developed using a mix of external sources and original content created by experienced educators (NGPF, 2025e).

Curriculum development is informed by educator input and is designed to support implementation by educators with varying levels of experience in financial instruction (NGPF, 2025f). In addition to financial content knowledge, the curriculum incorporates opportunities for students to build cross-disciplinary skills such as communication, analysis, and numeracy. It also includes materials intended to be relevant across a range of student backgrounds, with attention to accessibility and cultural responsiveness (NGPF, 2025d).

Student engagement

NGPF incorporates interactive and student-centered instructional strategies, including gamified tools and real-world scenarios (NGPF, 2025f). Examples include budgeting

simulations and digital games such as Payback and STAX, which focus on debt management and investing concepts. Materials are designed to be culturally relevant, inclusive, and accessible, supporting engagement across diverse student populations (NGPF, 2025g).

Professional development

NGPF provides free professional development through virtual and in-person workshops, certification courses, and a self-paced on-demand platform. Topics span core financial literacy areas, including budgeting, investing, and credit. Since its founding in 2014, over 100,000 educators have participated in training, and more than 12,000 certifications have been awarded. Offerings are designed to build both content knowledge and instructional confidence, and are regularly updated to reflect changes in the financial landscape (NGPF, 2025c).

Along with these free offerings, NGPF has provided in person training resources since 2016, offering 10 day summer "FinCamps" where educators are instructed in an intensive curriculum of financial education pedagogy, a longer summer institute, and a myriad of professional development conferences and events (NGPF, 2025h).

Effectiveness

Independent evaluations of NGPF curriculum point to measurable improvements in students' financial literacy. A 2023–24 assessment conducted in partnership with Penn State Behrend involved nearly 10,000 high school students who completed pre- and post-tests while using NGPF resources. Educators in the study reported using NGPF as their primary curriculum 81% of the time, and the assessment used standardized questions aligned to national financial literacy standards. Students' average scores rose from 47% to 67%, with particularly strong gains in topics like earning income (+28 percentage points) and managing risk (+24 points). Students using the NGPF curriculum in the cited study demonstrated measurable gains in financial knowledge within a single semester (NGPF, 2023).

Applications

Beginning with the class of 2027, the Dorothy Hukill Financial Literacy Act required all Florida high school students to complete a standalone personal finance course. To support implementation, NGPF and the Stiles-Nicholson Foundation committed $1 million toward educator training, offering stipends to Florida educators who completed designated professional development. As of September 2022, more than 2,000 Florida educators were using the NGPF curriculum, and 567 had completed nearly 10,000 hours of NGPF-approved training. Educators accessed one of three aligned professional development options: Certification Courses (nine hours of live virtual instruction plus an exam), On-Demand modules (self-paced Nearpod lessons), and Virtual professional development (PD) sessions (live, interactive one-hour webinars). These offerings were aligned to state standards and eligible for continuing education units, and they remained available as districts prepared for full implementation (NGPF, 2022).

Embedded curriculum case study: Advancement Via Individual Determination

Advancement Via Individual Determination (AVID) is a nonprofit organization that integrates financial literacy education into broader college and career readiness programming. AVID's mission statement advocates for the support of students who are historically underrepresented in higher education by equipping them with academic, social, and financial tools to support postsecondary success. Financial education is embedded within AVID's existing structures rather than delivered as a standalone course.

Curriculum

AVID curriculum is designed to foster college and career readiness across grades 6 through 12. Instructional content is framed through the WICOR model (Writing, Inquiry, Collaboration, Organization, Reading), which promotes active learning and critical thinking. Financial literacy content appears most explicitly in the 12th-grade AVID IV course, which includes units on FAFSA completion, scholarship applications, budgeting, and financial planning (Texas Education Agency, 2024). These topics are integrated into broader lessons on college application processes and life after high school (AVID, 2024).

Student engagement

AVID emphasizes collaborative and student-centered instructional strategies. Common practices include Socratic Seminars, Philosophical Chairs, peer tutoring, and Collaborative Study Groups. These strategies are intended to foster student ownership of learning and reflect AVID's belief that students learn more by speaking, questioning, and working together. Financial topics are addressed through these methods, encouraging students to actively discuss and apply real-life financial decisions (AVID, 2024).

Professional development

AVID provides professional development focused on building college readiness systems within schools. Educators receive training in instructional techniques, student support strategies, and leadership practices aligned to the AVID framework. Training includes standing opportunities for regional workshops, online modules, and coaching. AVID requires participating educators to have classroom experience and emphasizes peer-to-peer learning as part of its professional development approach (AVID, 2024).

Effectiveness

Studies reviewed by the U.S. Department of Education's What Works Clearinghouse indicate that AVID participation is associated with increased high school graduation and college enrollment rates. Participants are more likely to take advanced coursework and report greater confidence in navigating college admissions and financial aid processes (Todhunter-Ried et al., 2020). By supporting school persistence and exposure to postsecondary planning, AVID may influence students' understanding of financial pathways related to education. These academic

outcomes, combined with financial literacy components in the curriculum, suggest the program may support students' financial preparedness.

Applications

AVID is implemented in over 7,400 K–12 schools across the United States, reaching in total more than 2.5 million students across all grade levels annually. Its college and career readiness framework is used in diverse school systems, with financial literacy embedded in senior-year coursework such as the AVID IV class (AVID, 2024).

In Washington State, AVID is implemented in 405 schools across 90 public school districts, serving over 55,000 students as of the 2021–22 school year (AVID, 2022). Local implementations often include financial literacy components. At Shuksan Middle School in Bellingham, AVID students participated in a "Bite of Reality" budgeting simulation led by a local credit union (Whatcom Educational Credit Union, 2024).

Standalone and embedded comparison: AVID and NGPF

Table 1 gives a detailed comparison of NGPF (standalone content) and AVID (embedded content) as representative resource providers.

Table 1: Comparison of Standalone (NGPF) Versus Embedded (AVID) Resource Providers

Dimension	NGPF	AVID
Structure	Full standalone semester/yearlong course, standards aligned lessons and assignments	Integrated across subjects within AVID college readiness program
Flexibility	Moderate: allows customization of curriculum by offering choice between NGPF units and topics. Is largely all-or-nothing, and requires a dedicated class slot	Medium/high: requires established AVID structure, but flexibly integratable within that framework
School Accessibility	Very low cost investment, but high time investment	Medium/high investment cost, consisting of AVID seats and materials, as well as moderate time cost
Student Accessibility	Medium: complex in depth finance material may overwhelm students, but incorporation of gamified elements and real-life scenarios increases engagement	High: embeds finance material into familiar and relevant subjects, and encourages collaborative learning. Caters to underrepresented student populations
Educator Burden	Medium/High: free professional development, both in person and online, but demands increased prep time of a full course	Medium: comprehensive professional development requirement, but limited extra prep for integration with existing AVID courses
Student Engagement	High: interactive games, scenario-based learning, carefully integrated lessons	High: emphasizes discussion, student-lead learning, collaboration, and highly relevant college-readiness skills
Challenges	Heavy reliance on free NGPF material could limit resource exploration, and raises sustainability concerns; complexity of finance may overwhelm some students, and curriculum overload could detract from other subjects.	Requires significant time and resource investment on top of existing AVID investment prerequisite; may narrow/compromise material focus to accommodate college readiness themes
Use Case	Schools wanting intensive, comprehensive, cost effective finance education	Schools already committed to AVID, seeking to enhance their curriculum or integrate financial education

Embedded curriculum case study: embedding within a broader set of courses

Embedded financial education occurs in a variety of academic settings beyond dedicated personal finance or college readiness programs. While standalone courses like those offered by NGPF or integrated models such as AVID are common, financial literacy concepts are also embedded within traditional subject areas. The following course examples, derived from our educator surveys and interviews, illustrate where and how financial topics may be introduced through existing curriculum structures.

In surveys and interviews, educators list subjects that they personally find most effective or natural when incorporating an embedded financial curriculum. Educators report that while some subjects were easy to to embed financial topics, it was sometimes the subjects that had less obvious connections to personal finance that yielded the best results. The subjects described below were some of those most often recommended by our participating educators.

Calculus
Some AP Calculus instructors embed financial applications when teaching core topics, especially integrals and exponential functions. For example, a classroom activity based on compound interest uses integral calculus to model investment growth over time, showing students how to apply the formula dynamically through the area under the curve to model returns over continuous compounding. Educational technology platforms, like Texas Instruments' AP Calculus resources, also promote "teachable moments" where compound interest and amortization are explored using graphing calculators, reinforcing how calculus concepts underpin financial calculations.

Microeconomics & macroeconomics
Microeconomics and Macroeconomics introduce economic principles that typically align closely with financial education. Microeconomics addresses individual and business decision-making, while macroeconomics focuses on broader economic indicators, fiscal and monetary policy, as well as trade. These concepts help students interpret economic trends and understand how large-scale economic activity can affect personal financial decisions and vice versa.

Traffic safety
For many young people, transportation represents a major personal expense. Traffic safety courses can incorporate financial literacy by addressing the costs of car ownership, including maintenance, repairs, insurance, and traffic fines. Safe driving practices are also connected to financial outcomes, such as lower premiums and reduced out-of-pocket expenses.

Business & marketing
Business and marketing courses frequently incorporate financial literacy content. These classes often address topics such as budgeting, credit, saving, investing, and entrepreneurship, typically framed through practical applications like business planning or personal finance simulations. Instructional materials may come from providers such as iCEV, MyCareerTech, and Savvas Learning, which offer standards-aligned modules focused on financial decision-making and accounting. In some programs, students participate in work-based learning experiences or

manage student-run enterprises, applying financial concepts to track revenue, calculate expenses, and evaluate profitability.

History
History courses offer opportunities to examine how past economic events and policies influenced societies over time. This context can help students understand the longer-term effects of economic decision-making. The research and communication skills emphasized in history courses are also applicable to financial analysis, planning, and interpretation.

Adulting 101
“Adulting 101” refers to elective courses or workshops designed to support the transition to independent adulthood. These programs often include instruction in budgeting, goal setting, saving for emergencies and retirement, and understanding financial products such as credit cards, loans, and insurance. While not standardized across districts, they are intended to provide students with foundational financial knowledge.

Study results

Study overview and methodology

This study examined factors that influence the effectiveness of K–12 financial education in Washington State, with particular attention to differences between standalone and embedded course formats. The research focused on five key factors: depth of coverage, educator effectiveness and expertise, student engagement, prior exposure and readiness, and instructional modality and technology use. The study included three primary data sources: in-depth educator interviews, student and educator surveys, and a student assessment. Thirty seven middle and high school Washington educators representing a range of school types, regions, and financial education delivery models were recruited and interviewed using a structured protocol. Educator interviews explored instructional approaches, barriers, and perceived outcomes. Students in participating classes completed a standardized assessment consisting of a financial knowledge quiz and a survey of their learning experience at the end of the academic year.

The educator interview data were analyzed using grounded qualitative methods. Transcripts were coded to surface key themes and patterns, with attention to differences by course format and student population. The student assessment, administered to all participating students, provided the quantitative backbone to the analysis that was corroborated by educator interviews and surveys. The assessment included both multiple-choice financial knowledge questions and survey questions about confidence, engagement, and course experience.

A detailed description of study methods, limitations, sampling, analysis, and instruments is provided in Appendix sections B–H.

Quantitative findings

Overview

Using novel data on nearly 1,600 students across the State of Washington paired with rich class- and school-level data, this section investigates differences in student outcomes based on course format (standalone versus embedded) along financial literacy, interest, and confidence measures. From this analysis, there are four main takeaways.

First, students enrolled in standalone financial education courses score better than those in embedded courses in terms of financial knowledge, interest, and confidence. Compared to students in embedded courses formats, scores on the knowledge assessment are 5-10% higher, the percentage of students indicating they found their class to be interesting is 21 points higher, and the percentage of students indicating they are “a lot” more confident in making money decisions is 20 points higher. The largest knowledge score gap is in the question category of employment and income (eight percentage points) and the smallest gap is in the category of financial decision-making (three percentage points).

Second, the standalone-embedded gap in knowledge is entirely explained by differences across course formats in educator financial education experience and contact hours dedicated to financial education content. That is, after accounting for differences in educator experience and contact hours, students in embedded courses score no differently than students in standalone courses. However, the standalone-embedded gap in student interest and knowledge is not explained by a rich set of student, class, and school variables: students in standalone courses are still eight percentage points more likely to report high interest and 11 percentage points more likely to report they are much more confident in making financial decisions than students in embedded courses.

Third, the factors that predict student success on the knowledge assessment vary by course format. More educator experience with financial education and higher contact hours predict improved financial literacy in embedded courses, but not standalone courses. Students who previously thought about money are more likely to score higher in both course formats and students with previous financial coursework perform better in standalone classes.

Fourth, financial literacy improves as contact hours dedicated to financial education increases in embedded courses, but not standalone courses. In embedded courses, financial knowledge begins to measurably improve at 30 contact hours, and continues to improve as contact hours increase. In contrast, increased contact hours in standalone courses does not predict improved financial literacy. What follows is a summary of the student assessments, data, and analysis used to support these conclusions.

Student assessments

Participating students were given two assessments: a knowledge assessment and survey. The knowledge assessment includes 15 questions on six key competencies aligned with Washington State Financial Education K-12 Learning Standards: spending and saving, credit and debt, employment and income, investing, risk management and insurance, and financial decision-making.[1] Among the questions on this assessment are financial literacy questions commonly referred to as the "Big Three" which measures a basic understanding of compound interest, inflation, and risk diversification. The student assessment also contains questions commonly referred to as the "Big Five" developed by the National Financial Capability Study, which include the "Big Three" questions as well as two additional questions on investing and loan repayment.[2] There is considerable evidence that suggests not only are both the "Big Three" and "Big Five" valid and reliable in terms of measuring financial literacy, but they also have predictive power for a number of financial behaviors including retirement planning, retirement savings, returns on savings, stock market participation, portfolio diversification, portfolio returns, debt accumulation, credit scores, financial vulnerability, and over-indebtedness (Kaiser and Lusardi, 2024).

To complement the knowledge assessment, students were also given a 20-question survey designed to measure student confidence, attitudes, and opinions towards financial education. The complete student survey is given in Appendix section G.

[1] For more information, see https://ospi.k12.wa.us/sites/default/files/2023-08/fek-12learningstandardsoct2016.pdf.
[2] The full student knowledge assessment is given in the appendix, with questions three, five, and six corresponding to the "Big Three" and questions three, five, six, seven, and eight comprising the "Big Five."

Data

The data used in this section are derived from the student knowledge assessment, student survey, and educator survey collected during winter and spring of 2025 as part of this study. These data are combined with school-level information from the Washington Office of Superintendent of Public Instruction (OSPI). The final analytical sample includes information on 1,588 students in 43 classes taught by 37 educators in 28 schools across the State of Washington. More information about the sample can be found in Appendix section D, and further data analysis methodology information can be found in Appendix section B.

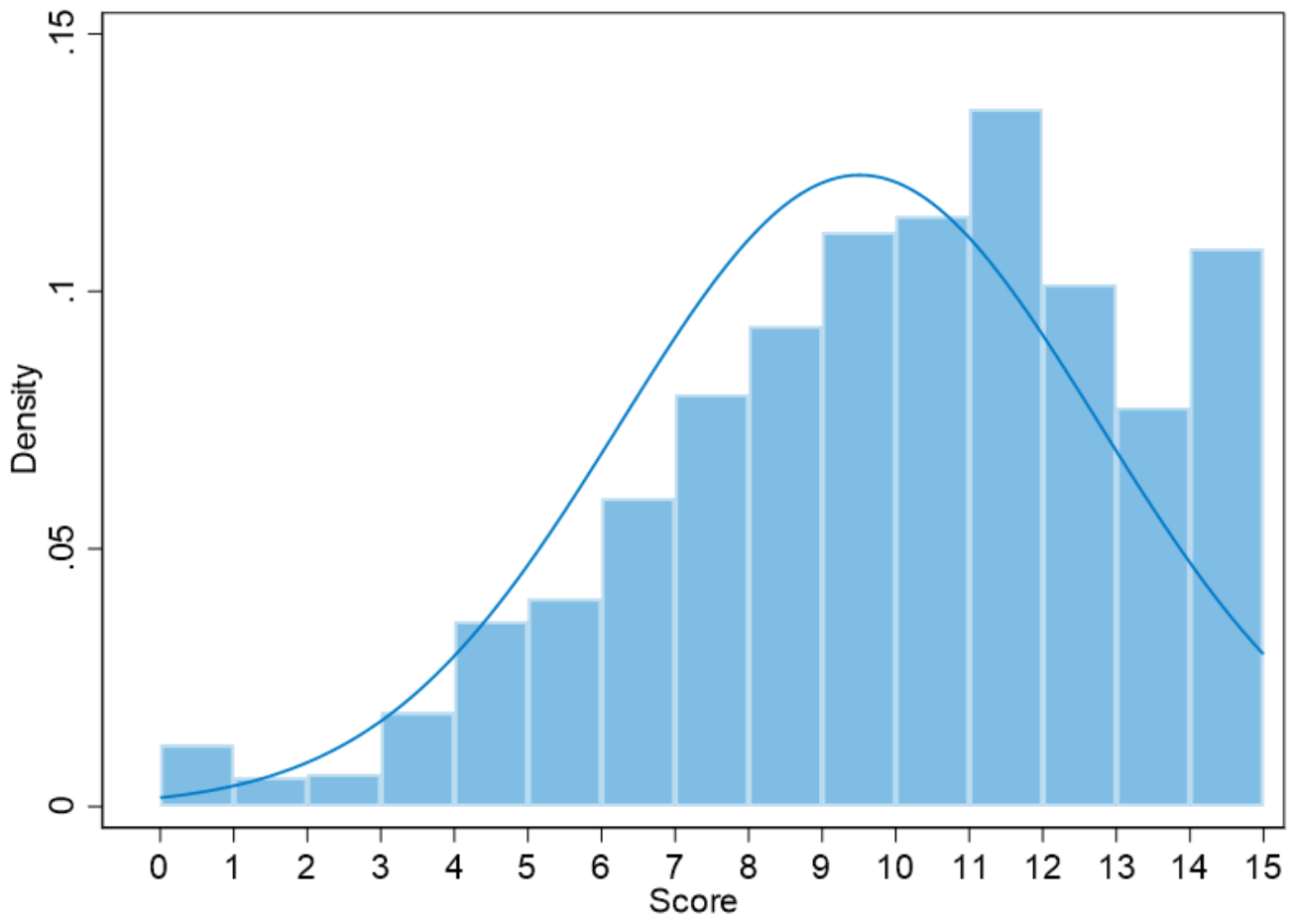
Descriptive statistics for the analytical sample are given in Table 2. Variables are grouped as either student-level, class-level, or school-level. The overall average score on the knowledge assessment was 9.51 (out of 15), 2.24 (out of 3) on the "Big Three" questions, and 3.35 (out of 5) on the "Big Five" questions. The distribution of student scores, found in Figure 2, suggests that student effort on these questions was reasonably high: less than 5% of students scored below four while nearly 11% of students answered 14 or 15 questions correctly.

Table 2: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Minimum	Maximum
Student-level					
Overall Score	1588	9.51	3.255	0	15
Big 3 Score	1588	2.235	.928	0	3
Big 5 Score	1588	3.347	1.335	0	5
High Interest	1588	.381	.486	0	1
Confident	1588	.313	.464	0	1
Previous Fin Ed Class	1588	.239	.426	0	1
Thought about Money	1588	.79	.407	0	1
Class-level					
Standalone Class	43	.58	.499	0	15
Teacher Experience	43	18.604	10.688	2	41
Teacher Experience - Fin Ed	43	9.279	9.801	1	40
Contact Hours	43	95.744	66.163	4	180
Class size	43	36.930	30.381	1	120
Taught Online	43	.186	.393	0	1
School-level					
High School	28	.821	.390	0	1
Title I School	28	.214	.417	0	1
Percent Free/Reduced Lunch	27	46.444	21.443	12.1	90.7
Percent ELLs	27	8.440	11.185	0	45.1
Percent Native	27	1.392	2.429	0	12.9
Percent Minority	27	40.248	18.424	16.5	99.1
Percent Low Income	27	45.674	20.348	13.5	86
Urban	27	.285	.460	0	1
Students/FTE Ratio	27	19.022	4.979	2.9	31.4
Per-Student Spending	27	18573	3332.868	12307	27731

Notes: There is one fewer observation for the school-level variables because one of the participating educators teaches in a juvenile detention center which does not have traditional school information.

Figure 2: Distribution of Knowledge Assessment Scores



Two outcomes derived from the student survey related to student engagement and learning are also analyzed. In this survey, 38% of students report that they found their financial education class to be “very interesting” (denoted by the binary variable High Interest) and 31% say that they were “a lot” more confident in making money decisions (denoted by the binary variable Confident).

Table 2 also shows that 58% of classes in the sample (25 of 43) are standalone financial education courses, with the remaining 42% of courses containing embedded financial literacy content. Overall, classes average about 96 educator contact hours dedicated to financial education topics, 37 students, and 19% include an online component (either hybrid or fully online). Educators in the sample have about 19 years of experience, on average, and about nine years of experience teaching in financial education.

Additional factors included in the analysis relate to students’ financial preparation. 24% of students in the sample had previously taken a financial education class, and 79% report thinking about money “a lot” or “some” before taking their current class.

In terms of school context, 82% of participating schools (23 of 28) are high schools and 18% are middle schools. 21% of schools are Title I schools and 29% were located in an urban setting. The percentage of free/reduced lunch recipients at participating schools is 46%, the

percentage of English language learners is 8%, the percentage of minority (non-white) students is 40%, and 46% of students at these schools come from a low-income background. Other descriptive statistics regarding school spending and student-educator ratios are reported in Table 2, as well as in Appendix Table 1 in section D.

Comparison of course formats

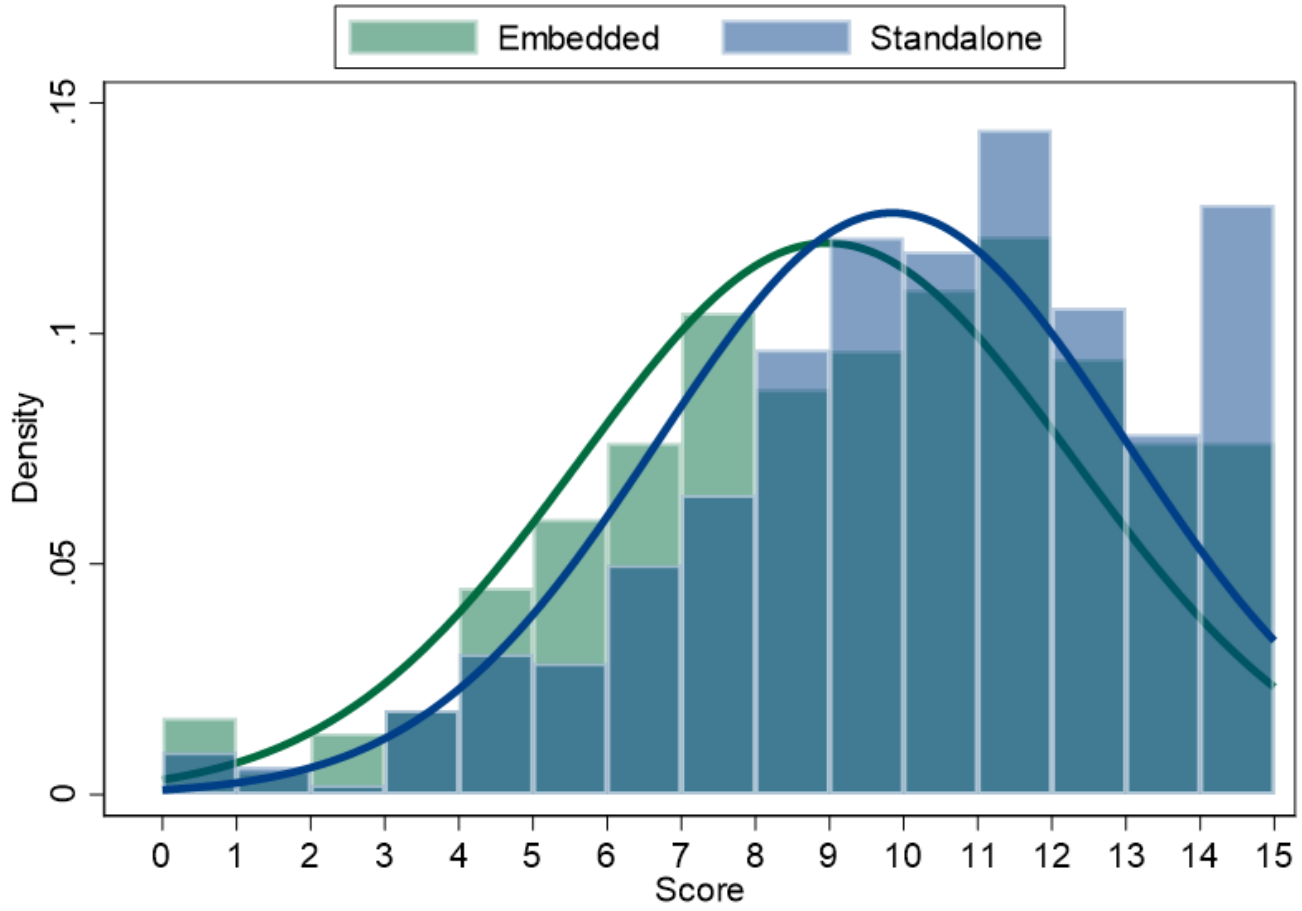
The analysis now turns to a comparison of average student outcomes and class characteristics across course formats. Table 3 reveals that students in standalone classes on average score significantly better on the knowledge assessment (overall, “Big Three” questions, and “Big Five” questions), scoring between 5-10% higher across these categories. Figure 3 shows the distribution of student knowledge scores by course format and suggests that the average difference between these groups is driven by a shift in the entire distribution of standalone class scores to the right: standalone class students are less likely to score any value below eight and more likely to score any value above eight.

Table 3: Average Student Outcomes and Class Characteristics, by Course Format

Variable	Standalone	Embedded	Difference (Standalone - Embedded)
Student-level	(Obs = 985)	(Obs = 603)	
Overall Score	9.84	8.97	.87***
Big 3 Score	2.27	2.17	.10**
Big 5 Score	3.44	3.20	.24***
High Interest	.46	.25	.21***
Confident	.39	.19	.20***
Class-level	(Obs = 25)	(Obs = 18)	
Teacher Experience	21.16	15.06	6.10***
Teacher Experience - Fin Ed	11.00	6.89	4.11***
Contact Hours	134.88	41.39	93.49***

Notes: Statistical significance for the difference in means (standalone minus embedded) is denoted by:
**** p<.01, ** p<.05, * p<.1*

Figure 3: Distribution of Knowledge Assessment Scores, by Course Format



The score gap is further investigated by breaking down average differences across the six financial education competencies, found in Figure 4. Standalone class students score higher across all competencies, with the largest gap being on Employment and Income questions (8 percentage points) and the smallest gap being on Financial Decision-Making questions (3 percentage points). In general, students are most successful on Credit and Debt questions (averaging 78% correct) and least successful on Financial-Decision Making (averaging 49% correct).

Figure 4: Average Knowledge Assessment Scores, by Competency and Course Format

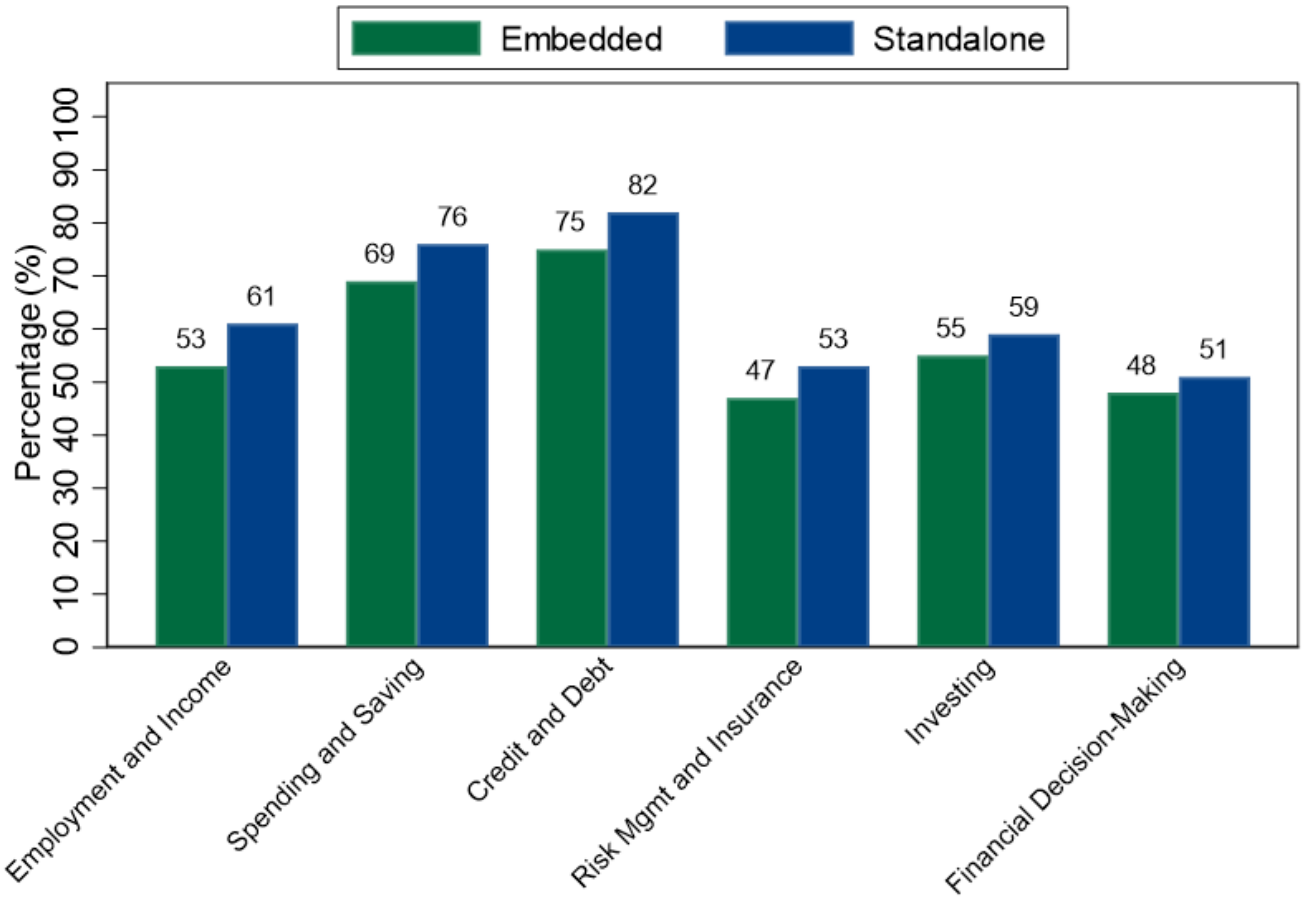
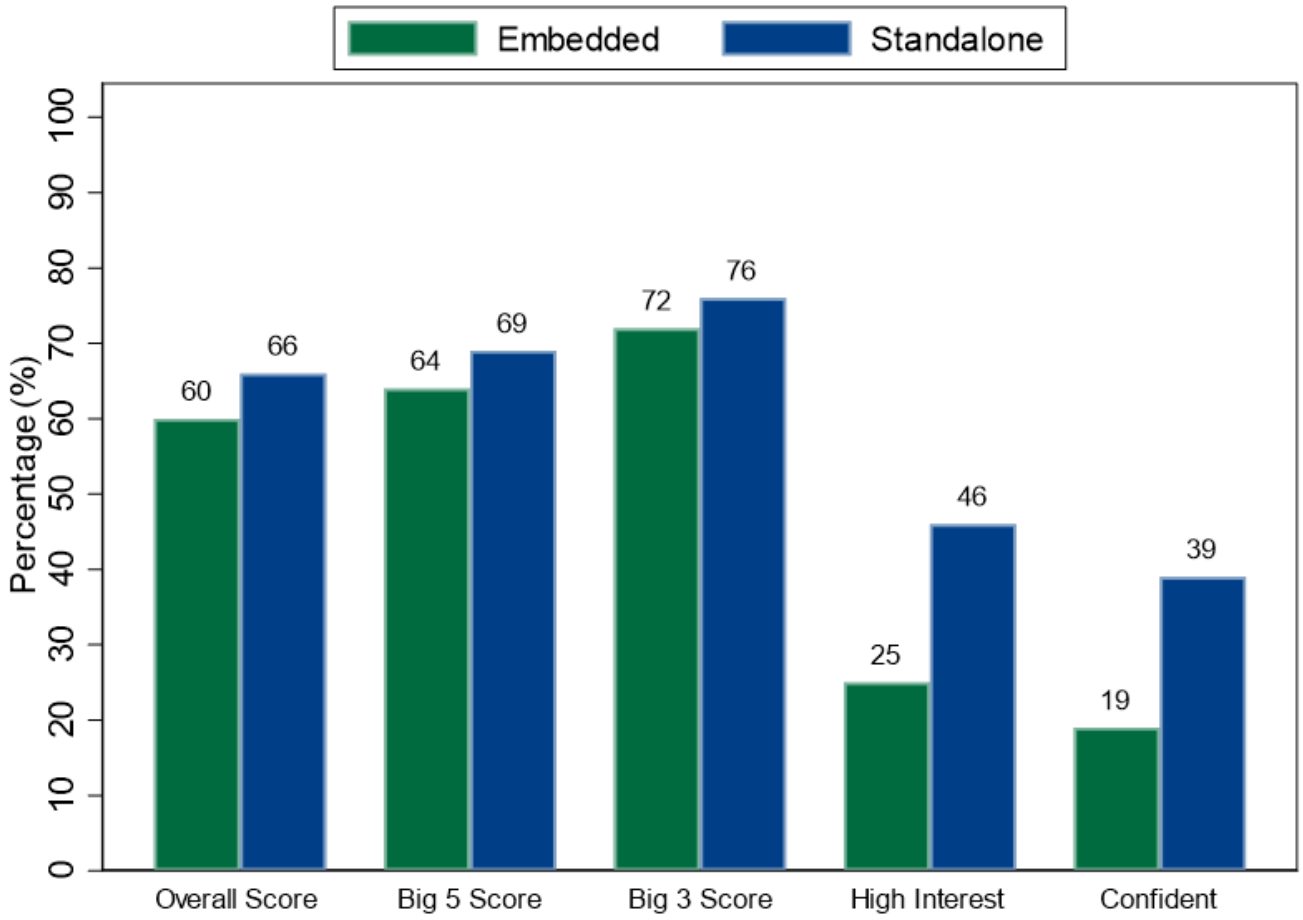


Table 3 also shows that students in standalone classes are much more likely to indicate high interest and confidence with financial topics at the end of the course: students from standalone classes are about twice as likely to answer affirmatively to these questions. Figure 5 visualizes the differences in student outcomes across course formats from Table 3 with a common axis by converting the assessment scores to percentages, emphasizing that the largest gap across course formats is the interest and confidence measures.

Figure 5: Average Knowledge, Interest, and Confidence Scores, by Course Format



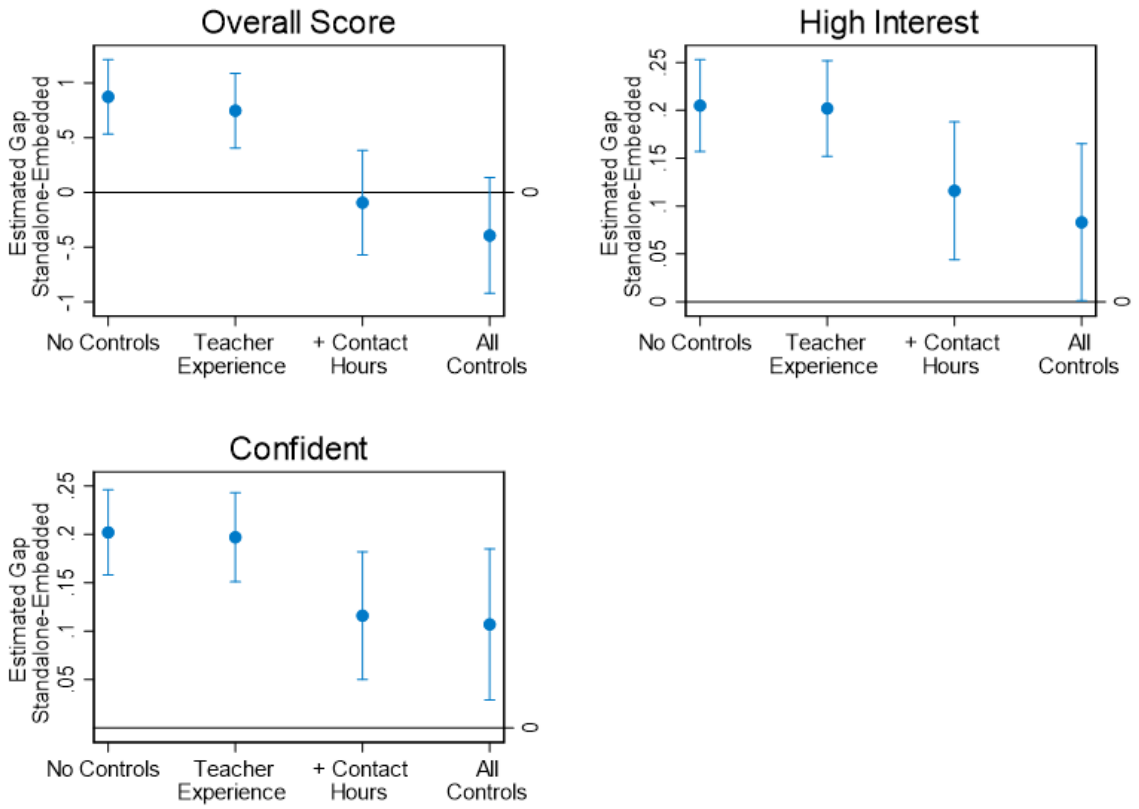
Explaining gaps across course formats

While the raw data suggest large gaps between standalone and embedded course formats in terms of student performance, interest, and confidence, there are other important differences across these groups. Table 3 shows that, on average, educators in standalone financial education courses have about six more years of experience overall, four more years experience teaching financial education, and, most notably, have nearly 100 more contact hours dedicated to personal finance content than in embedded course formats.

To better understand the gaps between course formats, a regression framework is used to account for student-, class-, and school-level factors that may be driving any observed differences in student outcomes across standalone and embedded courses. Appendix Tables 2, 3, and 4 give the regression model output for the student knowledge, interest, and confidence outcomes, respectively. These models add explanatory variables incrementally across columns: column (1) gives the raw standalone-embedded gap, column (2) adds controls for educator experience, column (3) adds educator contact hours, and column (4) adds all student-, class-, and school-level variables found in Table 2.

Figure 6 gives a visual depiction of the coefficient on the Standalone binary variable, showing the size of the standalone-embedded gap for the three main outcomes of interest: student knowledge, interest, and confidence. Adding controls for years of educator experience (overall and within financial education) reduces the standalone-embedded knowledge gap by about 15%, but adding contact hours makes the gap statistically indistinguishable from zero. This suggests that standalone-embedded course differences in student performance are almost entirely explained by standalone courses having more experienced educators and more contact hours than embedded courses. The addition of the full set of control variables from Table 2 further reduces the standalone-embedded gap, and it remains statistically no different from zero.

Figure 6: Estimated Standalone-Embedded Gap in Knowledge, Interest, and Confidence Scores, by Regression Model



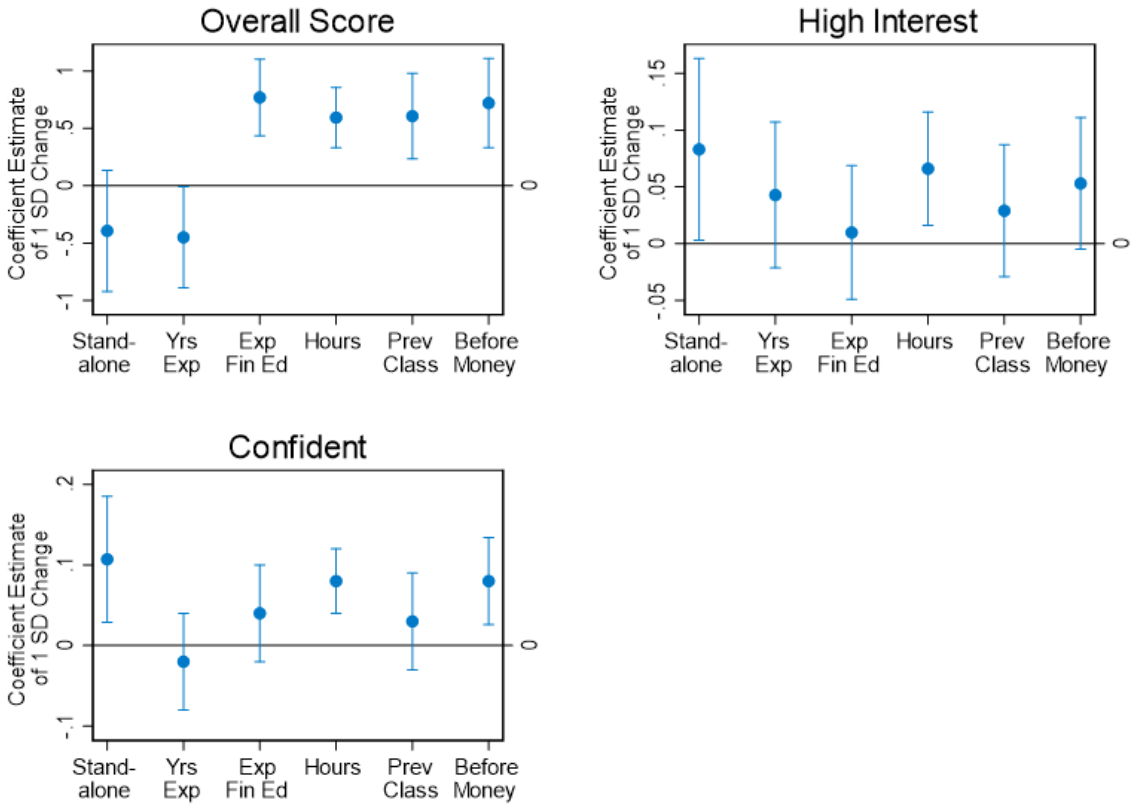
Notes: These graphs depict the coefficient on standalone from Appendix Tables 2 - 4, or the size of the standalone-embedded gap for each model and outcome. The bars represent the 95% confidence interval for each coefficient.

However, a different pattern emerges when analyzing student interest and confidence in Figure 6. The addition of all control variables reduces the standalone-embedded gap in student interest and confidence by roughly 50%, but these explanatory variables do not fully explain the gap in these outcomes. Even after controlling for the myriad of student, class, and school variables from Table 2, students in standalone courses are still eight percentage points more likely to report high interest and 11 percentage points more likely to report they are much more confident in making financial decisions.

Factors that predict student success

To further understand the importance of factors in explaining student outcomes, Figure 7 displays the coefficient estimates from the last column of Appendix Tables 2-4 for five key predictors of student outcomes: course format, overall educator experience, educator experience in financial education, students' previous experience with financial education, and how much the student thought about money before the class.[3] For reference, the Standalone variable, which measures the regression-adjusted standalone-embedded gap for each outcome, is given in each subfigure and is the same estimate found in the last column of each subfigure in Figure 6. For the student knowledge assessment, more years of educator experience in financial education is associated with higher scores, but more years of overall experience is not. More contact hours, having taken a previous financial education course, and the student having thought at least somewhat about money before the class are also significant predictors of student achievement.

Figure 7: Estimated Regression Coefficients from Knowledge, Interest, and Confidence Score Models, by Variable



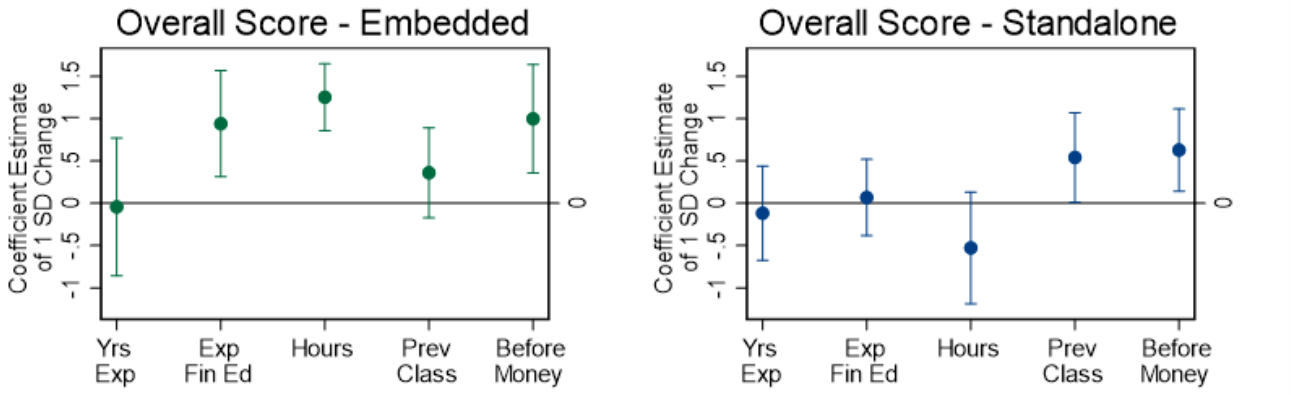
Notes: These graphs depict the coefficient estimates from Appendix Tables 2-4 corresponding to the binary indicator for being in a standalone financial education class ("Standalone"), years of educator experience ("Yrs Exp"), years of educator experience in financial education ("Exp Fin Ed"), number of contact hours ("Hours"), the binary indicator for the student having previously taken a financial education course ("Prev Class"), and the binary indicator for the student having thought about money before the course either "some" or "a lot" ("Before Money"). Coefficient estimates for the experience and contact hours variables have been altered to give the predicted change in the outcome variable for a one standard deviation change in the explanatory variable. The bars represent the 95% confidence interval for each coefficient.

[3] Coefficient estimates for the experience and contact hours variables have been altered to give the predicted change in the outcome variable for a one standard deviation change in the explanatory variable. Standard deviations for all variables can be found in Table 1.

In terms of fostering student interest and confidence, Figure 7 reveals that more contact hours are positively related to both. The student previously thinking about money is also associated with more student confidence with financial decisions.

The analysis next allows the relationship between these factors and student performance to vary by course format. Figure 8 displays the course-format-specific coefficient estimates, focusing on student knowledge.[4] Increased educator experience with financial education and more contact hours relates to improved student knowledge in embedded courses, but not standalone courses. Students who previously thought about money are more likely to score higher in both course formats, whereas students with exposure to previous financial coursework are only more likely to perform better in standalone classes.

Figure 8: Estimated Regression Coefficients from Student Knowledge Assessment Score Model, by Variable and Course Format



Notes: These graphs depict the coefficient estimates corresponding to the interaction of course format with years of educator experience ("Yrs Exp"), years of educator experience in financial education ("Exp Fin Ed"), number of contact hours ("Hours"), the binary indicator for the student having previously taken a financial education course ("Prev Class"), and the binary indicator for the student having thought about money before the course either "some" or "a lot" ("Before Money"). Coefficient estimates for the experience and contact hours variables have been altered to give the predicted change in the outcome variable for a one standard deviation change in the explanatory variable. The bars represent the 95% confidence interval for each coefficient.

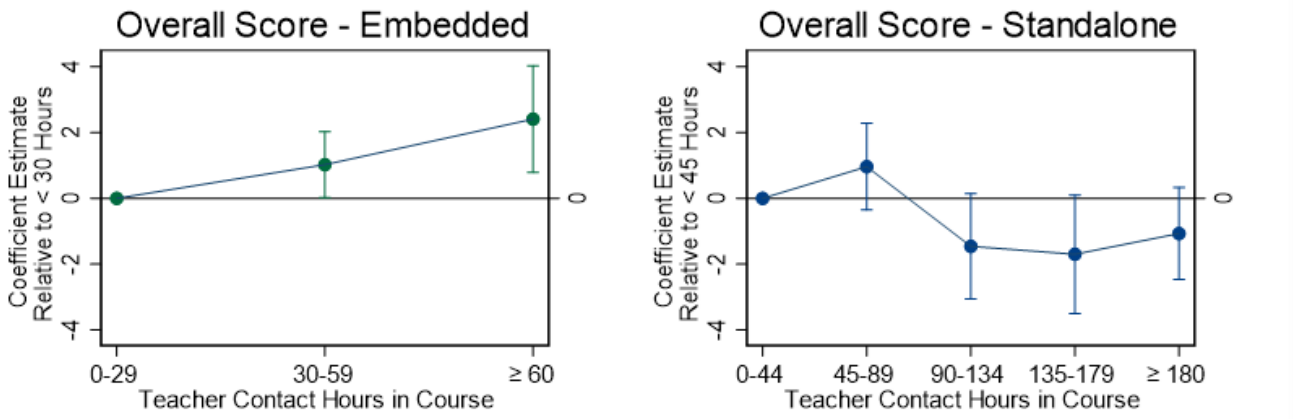
Lastly, because the number of educator contact hours is a strong predictor of student learning in embedded courses and an important consideration for course design, the analysis models allow the relationship between contact hours and student scores to vary in a non-linear way by interacting course format with binary indicators for the level of educator contact hours throughout the course. For embedded courses, these categories are less than 30 hours, 30-59 hours, and 60 hours or more. For standalone courses, these categories are less than 45 hours, 45-89 hours, 90-134 hours, 135-179 hours, and 180 hours or more. Figure 9 depicts the coefficient estimates from this model, where the reference (omitted) category for embedded courses is having less than 30 contact hours and less than 45 contact hours for standalone courses.[5] In embedded courses, educators offering 30-59 hours of financial education content

[4] Though not provided here, the full regression estimates from this model and those with student interest and confidence are available from the authors by request.

[5] Though not presented here, these coefficient estimates are derived from the same model given in Appendix Table 4, where the "contact hours" variables have been replaced with the binary indicators for the level of educator contact hours interacted with course format. Full coefficient estimates from this model are available from the authors by request.

have students who score (on the knowledge assessment) about one point better and educators with 60 or more contact hours score about 2.5 points better than educators offering less than 30 contact hours, on average. However, unlike in embedded courses, financial knowledge in standalone courses is not strongly related to contact hours: more contact hours do not predict more student learning in these courses.

Figure 9: Estimated Non-Linear Effects of Educator Contact Hours, by Course Format



Notes: These graphs depict the coefficient estimates corresponding to the interaction of course format with binary indicators for the level of educator contact hours throughout the course. For embedded courses, these categories are less than 30 hours, 30-59 hours, and 60 hours or more. For standalone courses, these categories are less than 45 hours, 45-89 hours, 90-134 hours, 135-179 hours, and 180 hours or more. The reference (omitted) category for each coefficient is having less than 30 contact hours for embedded courses and less than 45 contact hours for standalone courses. The bars represent the 95% confidence interval for each coefficient.

Conclusion

This analysis documents and explains gaps in student outcomes across two course formats commonly used to teach financial education: standalone and embedded. The following policy considerations regarding financial education course design are based on our findings.

In terms of student knowledge, there appears to be nothing "special" about standalone classes: that standalone classes score higher on average than embedded classes is explained by standalone classes having educators with more experience (particularly in financial education) and more contact hours. However, students in standalone courses tend to have significantly higher levels of interest and confidence, and these gaps are not easily explained by observable differences in characteristics across course formats.

In both standalone and embedded courses, students with prior interest in financial matters have higher financial literacy. In standalone courses, students who previously had taken a personal finance course also have more financial knowledge. Though not necessarily causal, these correlations motivate the need for financial education to occur earlier in school.

Lastly, the data suggest there are sizable returns in student learning to increasing contact hours and educator experience with financial education in embedded courses. Standalone courses, on the other hand, do not experience these same returns, perhaps due to already having

sufficiently high levels of educator experience and contact hours. Any requirements for financial education embedded within a larger course should include a minimum number of contact hours dedicated to financial topics (our analysis suggests at least 30 hours) and educator professional development related to financial education.

Qualitative findings

Overview

Drawing on qualitative data from 37 educator interviews, open-ended survey responses, and student reflections, this section explores how instructional time, educator background, student engagement, prior exposure, and instructional modality influence classroom experiences in financial education.[6] The themes drawn from these interviews and surveys provide context for the quantitative findings and reveal implementation patterns across a wide range of schools. From this analysis, five key insights emerge.

First, depth of coverage is shaped most by instructional time and course format. Standalone classes with extended contact hours allow for applied projects, iterative skill-building, and deeper exploration of financial topics. In contrast, embedded courses with limited time often rely on abbreviated coverage, particularly when educators lack a defined scope and sequence.

Second, educator expertise is central to instructional quality. Educators with significant finance and relevant professional development experience demonstrate higher content fluency, greater adaptability, and more tailored lessons. Those assigned to teach financial education without sufficient training report that they rely on inherited materials and struggle with foundational concepts.

Third, student engagement increases when content is developmentally appropriate and personally relevant. Topics like taxes, credit, and investing capture interest when connected to real-life experiences. Project-based learning and guest speakers foster participation, especially in classrooms where students have autonomy and see clear links to their future.

Fourth, prior financial socialization and mathematical background influence how students engage and respond to instruction. Some students arrive with inherited familiarity and confidence with financial education topics, while others lack exposure to basic financial concepts or encounter resistance at home. Educators adapt instruction accordingly, but note that gaps in numeracy, language, or home-life stability can compound barriers to engagement.

Fifth, instructional modality and technology use are most effective when carefully integrated into pedagogy. Educators value digital tools that enhance realism and interaction, such as simulations and budgeting apps. However, infrastructure disparities and inconsistent implementation mean these tools do not benefit all students equally.

[6] Further information about the educator survey and interview methodology can be found in Appendix section E and F, while further educator demographic information can be found in Appendix Section D.

These qualitative insights offer a view of how financial education unfolds in real classrooms, highlighting the conditions that enable or constrain effective instruction and learning across students and settings.

Together, these qualitative insights offer a view of how financial education unfolds in real classrooms, highlighting the conditions that enable or constrain effective instruction and learning across students and settings. Next, we give more detail on the qualitative evidence, which is grouped into five categories: depth of coverage, educator effectiveness and expertise, student engagement, prior student exposure and readiness, and instructional modality and technology use.

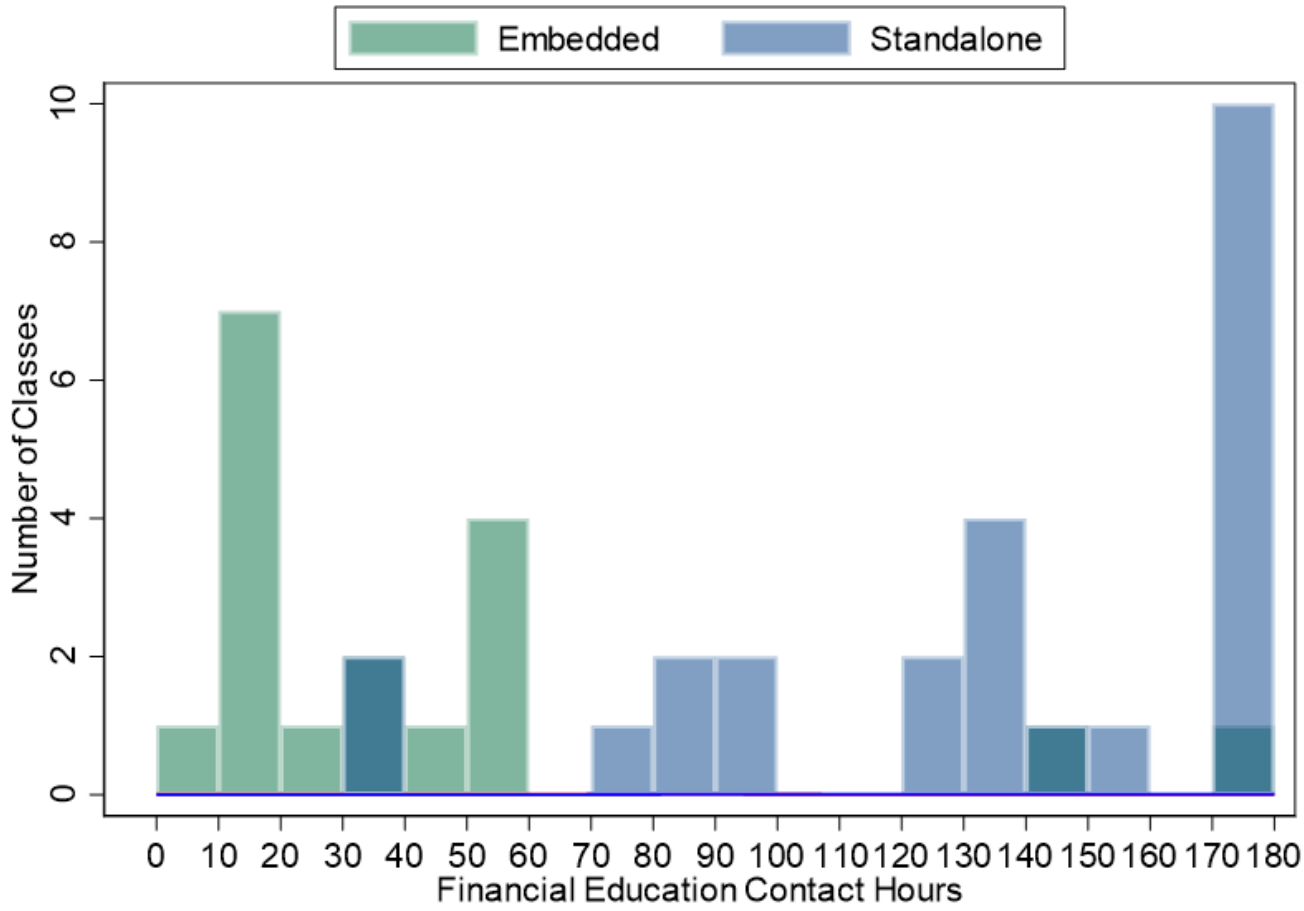
Depth of coverage

Depth of coverage refers to the degree to which students explore and master financial topics depending on course design, time allocated, and instructional pacing. Educator interviews reveal significant variation in how deeply financial topics are addressed, often linked to structural factors such as availability of contact hours and course format. Educators frequently describe how course structure shapes their ability to cover content in depth.

One recurring theme in the interviews for embedded formats is that inadequate contact hours lead to surface-level instruction. One embedded educator with 45 contact hours notes that “A quarter is really not much time to get into stuff... I don’t really get into too much of the stock market or investing." These effects are particularly acute with less-experienced educators without clear integration sequences or scope. One shares, “It’s only two weeks embedded. I’m not trained in this.” Others report having no scope or sequence to their financial education curriculum and the need to prioritize breadth over depth.. This is corroborated in the educator survey, where educators comment on how fewer contact hours result in less learning. One educator with less than 20 contact hours notes that her students had so little time dedicated to the subject that they believed they saw almost no benefit.

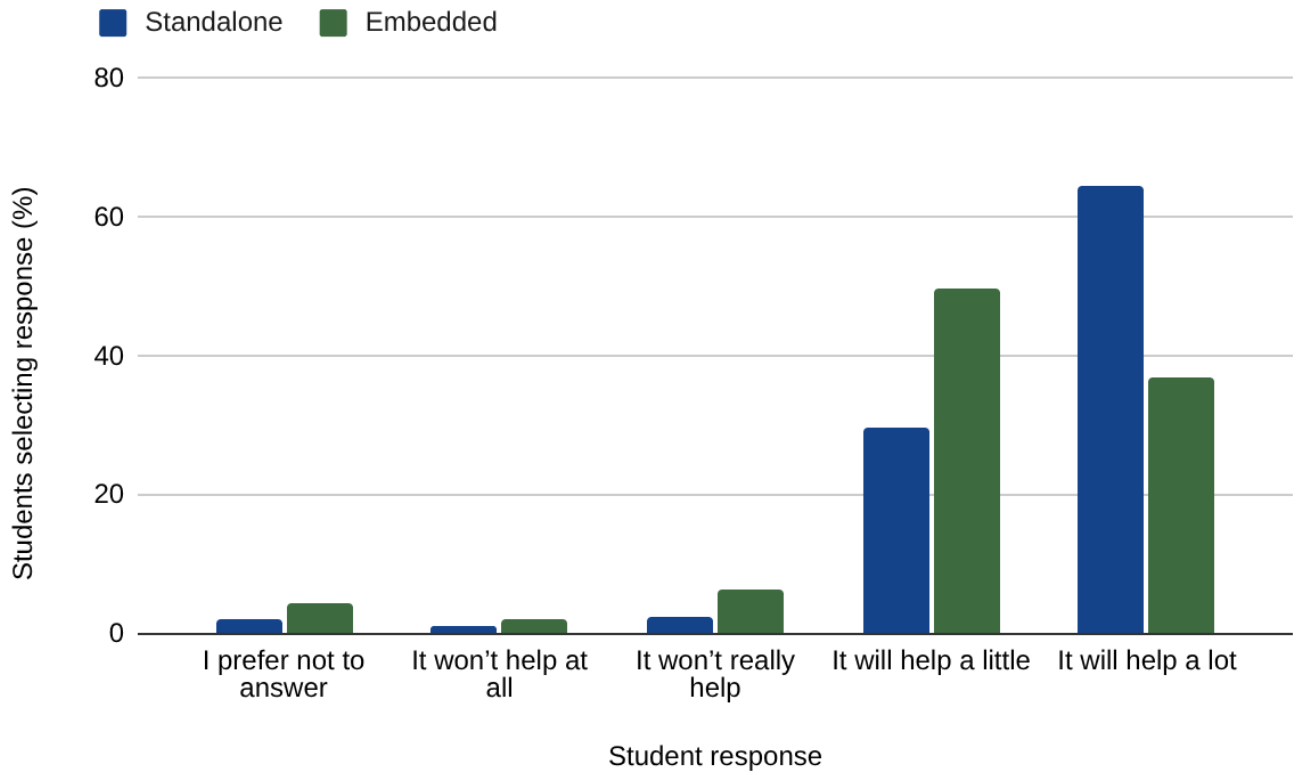
In contrast, standalone courses allow for more depth across a variety of topics. One educator states, "By the end of the year they’re actually starting to approach algebra." A standalone educator with more than 100 contact hours over an entire year details the level of depth possible: “They would create their own budget using Excel...track every single expense...and submit that every single month.” The discrepancy in instructional time is detailed in Figure 10, which illustrates the distribution of financial education contact hours by course format. Half of all embedded courses have less than 30 contact hours dedicated to financial content, whereas the majority of standalone courses have at least 135 contact hours.

Figure 10: Distribution of Financial Education Contact Hours, by Course Format



These contact-hour discrepancies are reflected in the student surveys, as students in embedded courses leave class feeling less prepared than students in standalone courses. As shown in Figure 11, 64% of students in standalone courses respond that their class "will help a lot" with regards to their future money choices compared to only 37% of students in embedded courses courses. The amount of contact hours dedicated to financial topics appear to make a large difference in terms of engagement and interest. One student in a class with 150 contact hours said that "this has been one of the most important and interesting classes I have ever taken." In classes with few contact hours, students reported being "mentally checked out" and thinking that, because of the limited scope, the class was "basically pointless."

Figure 11: Student Responses to "How do you think what you learned in this class will affect your future money choices?", by Course Format



Despite the obvious limitations in embedded courses, many educators believe that embedding financial education content still has significant potential. For students who only have access to standalone financial education through non-traditional courses at their school (e.g., credit recovery or remedial courses), standards-aligned embedded courses present an important opportunity. Many educators believe that, for some students, embedded financial education was more engaging, not less. "When we have the ability to embed and still achieve the standards in classes with the flexibility that meets where kids are…[it allows us] to increase the student engagement and help them to see the relevance in their lives," one high-scoring educator says. For these educators, embedded education was an important tool that, given the right environment, could improve financial literacy for any student.

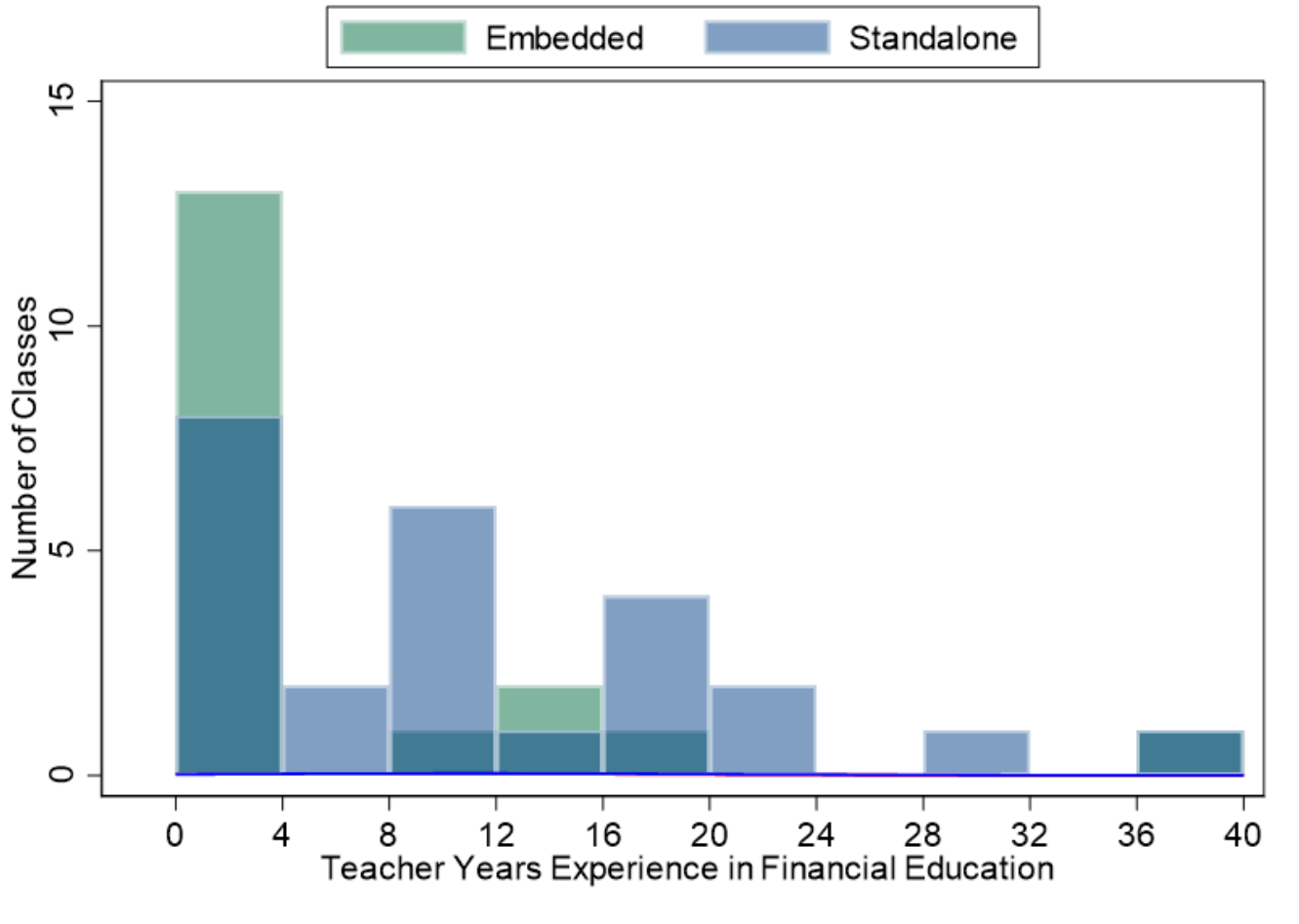
> **"When we have the ability to embed and still achieve the standards in classes with the flexibility that meets where kids are…[it allows us] to increase the student engagement and help them to see the relevance in their lives."**
>
> **- Educator**

Educator effectiveness & expertise

Educator effectiveness and expertise capture how educators' financial knowledge, confidence,

and professional learning shape classroom quality. There are large differences in experience with teaching financial education across course formats, as shown in Figure 12. Over two-thirds of teachers in embedded courses have less than four years of experience with teaching financial content, whereas 60% of teachers in standalone courses have more than four years of experience.

Figure 12: Distribution of Teacher Years Experience in Financial Education, by Course Format



Educators with a finance background or a long-standing interest in personal finance describe greater ease in planning lessons and adapting examples. “Each year I figure out more about it. I get more confident the more I teach it,” one veteran explains. Credibility also grows when educators share real experiences; another educator says, “I missed a credit card payment and confessed it.” In contrast, instructors reassigned from unrelated subjects often rely on inherited worksheets and voice uncertainty. A newly assigned physical-education educator admits, “Investing is the hardest for me. I’m still learning it too.” Also, fundamental topics can suffer: “Compound interest just flies over a few heads,” one educator notes, and another

> **“There was no training. I just got the textbook and started teaching.”**

recalls, “There was no training. I just got the textbook and started teaching.”

Professional development and mentorship can help moderate these gaps. Several educators credit workshops and peer coaching for improved instruction, with one mentioning, “Having someone to call and ask, what did you do on this unit, made all the difference.” Others face funding barriers, reporting, “I was denied by my administrator. No money for professional development.” Student surveys reflect these distinctions: classes led by experienced educators were described as “fun” and “digestible,” whereas a student in a course taught by a second-year educator remarks, “they don't really understand.” Additionally, structured individual reflection is important. Multiple educators comment that the survey and interview process ranked as the most, or one of the most, impactful professional learning opportunities of the year, largely because of its self-reflective nature.

Many educators interviewed have a relevant financial background, often in business. That background allows for insight into which topics students find difficult, fluency with complex concepts, and confidence to embed personal stories. Although already skilled, these educators still tend to pursue professional learning to keep examples current, reflecting a shared view that “teaching is based on confidence, and confidence is ninety percent enthusiasm.” Collectively, the evidence suggests that deep content knowledge, targeted professional development, and structured mentorship are valuable for consistent, high-quality financial education, especially when instructional time is limited.

Student engagement

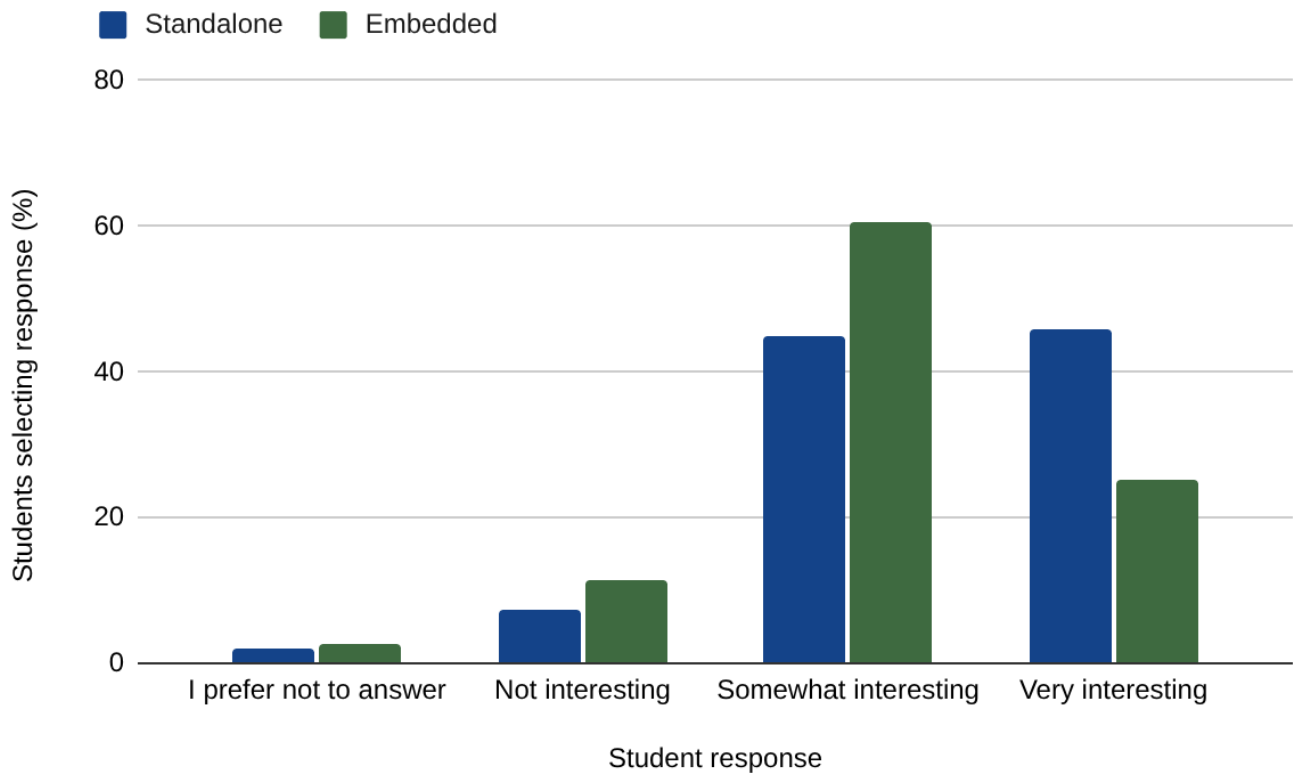
Student engagement and relevance refer to the attention students bring to class and the extent to which they view the material as meaningful to their own lives. According to the educator interviews and the open-ended student survey responses collected for this study, engagement rises when lessons feel practical, interactive, and developmentally appropriate. Educators and students repeatedly link real-life application to higher motivation. As seen in Figure 13, students in standalone courses report higher levels of interest, with 46% of standalone-course students reporting they found the class to be “very interesting,” compared to only 25% of embedded-course students.

Student engagement came from a variety of sources, with project-based learning being a consistently praised strategy. One educator reports, “They created a podcast...they took it seriously because they knew others were listening.” Another observes, “Presentations and projects create more meaningful investment from students than any multiple-choice quiz ever could.” Inviting outside experts also helps. An educator notes, “I bring in a financial planner. They love those days.” These accounts illustrate how authentic tasks and guest speakers can transform abstract concepts into tangible experiences.

Another common theme for enhancing engagement is that immediate personal relevance mattered more than abstract importance. Retirement planning and checkbook balancing are seen as too remote or outdated to capture student interest. Conversely, taxes and investing are consistently described as high-engagement topics. “They love the taxes unit because it’s real,”

one teacher reports. Another shares, “Investing is the hook.”

Figure 13: Student Responses to “How interesting did you think the class was?”, by Course Format



The students’ developmental stage also strongly shapes engagement. A middle-school educator reflects, “It’s hard for a 13-year-old to think beyond tomorrow,” whereas older students, especially those with jobs, show greater interest in budgeting and credit. As one educator explains, passing through milestones like “getting a first job or a driver’s license” create a meaningful shift: students suddenly recognize the relevance of savings, credit, and budgeting. Student survey responses echo this pattern. One high-school respondent wrote that personal finance “helped me think more about how I want to live my life.” Middle schoolers, although curious, sometimes struggle to connect topics like investing to their immediate concerns, saying, “I don’t think that at this age we need to know about investing.”

As one educator explains, passing through milestones like “getting a first job or a driver’s license” create a meaningful shift: students suddenly recognize the relevance of savings, credit, and budgeting.

Despite significant variation in the perceived importance of various instructional factors, the vast majority of student surveys (roughly 80%) indicate “real-life examples” as an activity that helped them learn the most. Other options (games, videos, group work, lectures) are less consistently chosen but still receive response rates between 40-60%.

These qualitative accounts suggest that relevance and collaboration are central drivers of engagement, although this study is not able to independently validate the effectiveness of specific activities.

Some students met resistance when sharing new financial ideas at home, encountering family members who “perhaps identified this as a painful subject.”

However, several context-specific barriers can suppress engagement. In schools serving high-poverty populations, educators describe persistent obstacles. One educator says, “This is the lowest engagement year I have ever seen. Assignment completion is around 40 percent.” Interviewees connected low engagement to trauma, limited academic confidence, and unstable home environments. Some students met resistance when sharing new financial ideas at home, encountering family members who “perhaps identified this as a painful subject.”

Other educators identify engagement as a major problem for other reasons. “Some of them are just placed here. They didn’t pick this class,” one educator notes. Another says, “This tends to be the class where counselors say, we’ll just put you in that one.” Educator survey responses confirm the variability in engagement across settings. Qualitatively, educators teaching embedded courses mention lower engagement more frequently.

Prior student exposure & readiness

Prior financial socialization and readiness refers to the knowledge, attitudes, and skills students bring from home experiences, earlier coursework, and personal encounters with money. These starting points affect pacing, topic selection, and the instructional strategies educators choose. Interview data suggest that students who enter class with even minimal exposure to budgeting or banking concepts engage more confidently, whereas peers without that exposure often need additional scaffolding. Although they average higher scores on the knowledge assessment, standalone-course students report less previous financial education experience and lower pre-class interest in money than embedded-course students. As shown in Figure 14 and 15, 19% of standalone students versus 32% of embedded students had previous coursework, and 78% of standalone students versus 81% of embedded students report thinking about money “a lot” or “some” before taking their current class.

Educators describe wide variation in baseline skills and emphasize how it shapes day-to-day decisions. One educator remarks, “Some come in without one-step equation skills,” and another adds, “Students show up… and they’ve never had a bank account.” Educators share that they often have to scale back lessons or slow pacing to accommodate gaps in math, reading, or basic financial awareness. Many cite the unpredictability of incoming skill levels and prior exposure as a persistent challenge. Students themselves sometimes complain about the difficulty of math-heavy coursework, stating that they feel unprepared. English language learners and students receiving special education services frequently require extra vocabulary support, prompting instructors to rely on visuals and step-by-step practice. Several interviewees also flag the absence of a clear scope and sequence across grade levels, noting

Figure 14: Student Responses to "Including this class, how many financial education classes have you taken before?", by Course Format

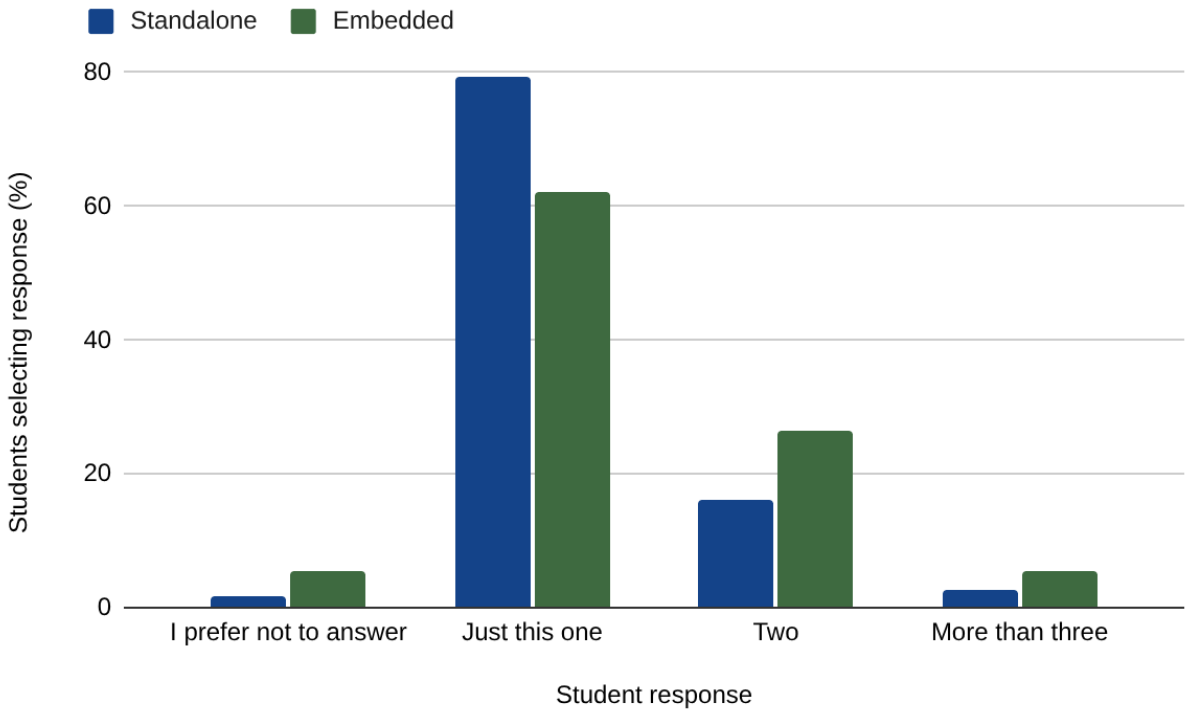
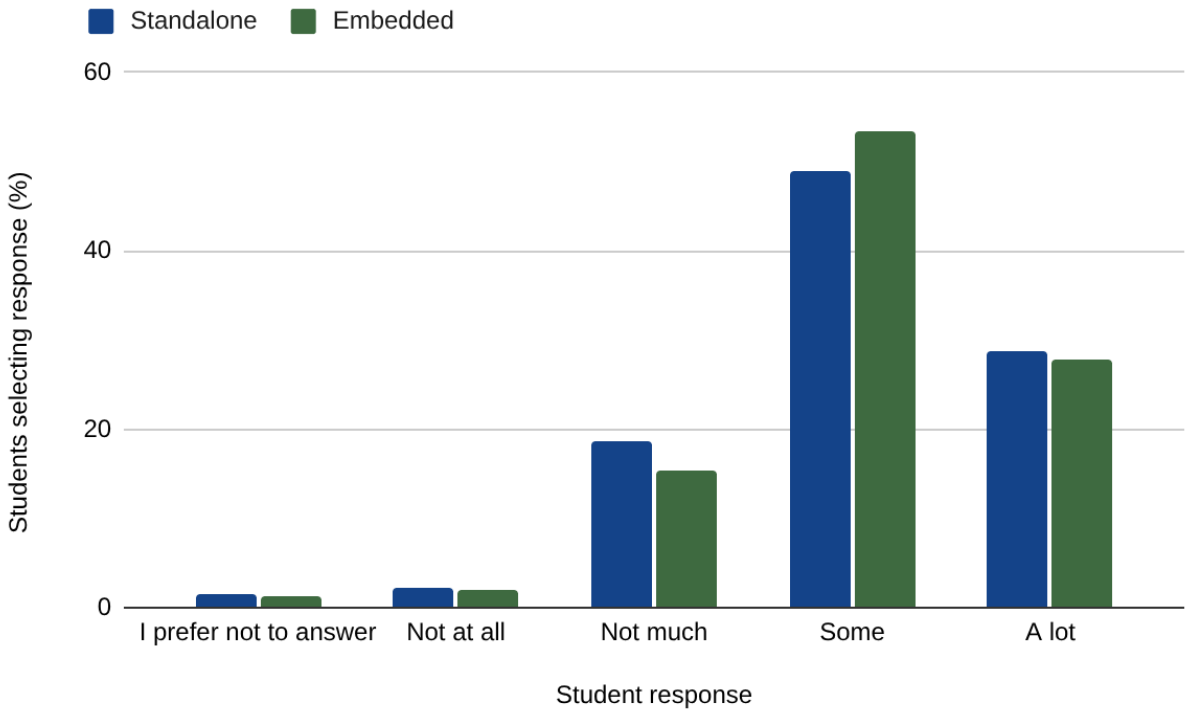


Figure 15: Student Responses to "How much did you think about money before you took this class?", by Course Format



that they are often unsure about what students had already covered in earlier years.

Despite concerns about numeracy, many educators note that advanced calculations were seldom the real barrier. One educator describes that “very little math, and almost no advanced math, was needed.” Educators often emphasize context and motivation over formulas, with one suggesting that students “needed foundational and conceptual understanding above all else.”

Those in high-poverty settings describe additional hurdles. Some educators mention that emotional stress and unstable home environments sometimes limited participation, and some families reacted defensively when students introduced new ideas about credit or savings.

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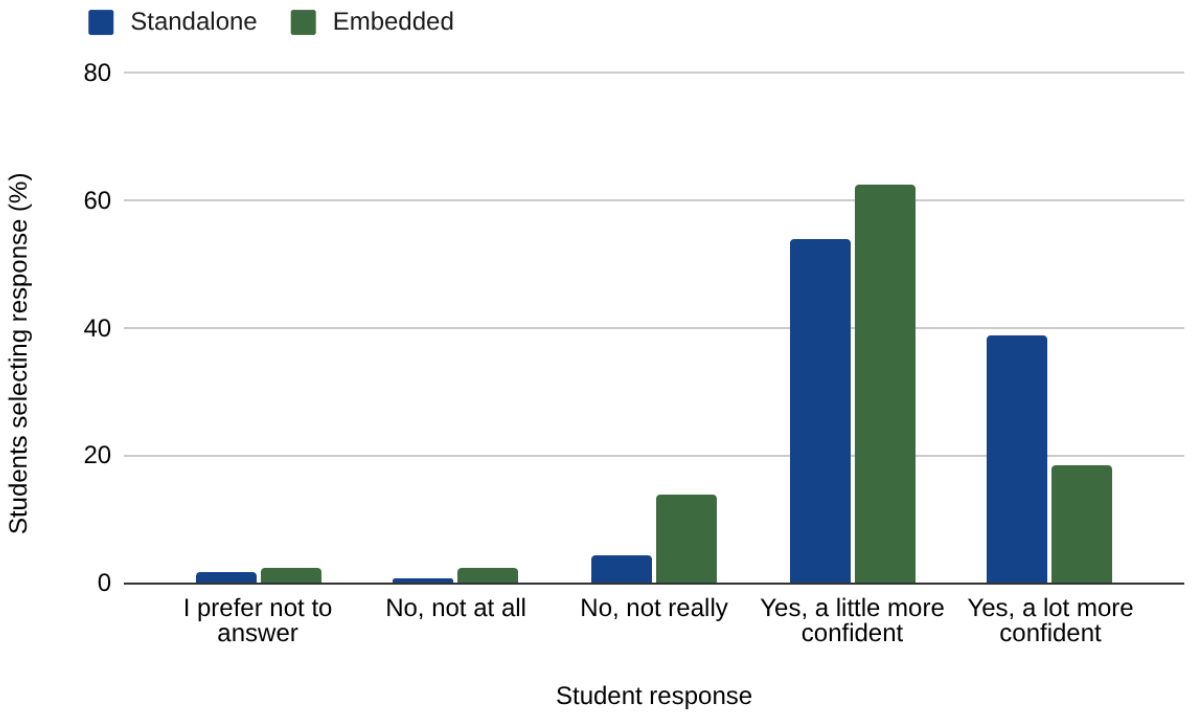
Student survey comments reflect these divergent experiences. Many respondents report a growth in confidence and decision-making when instruction involves real-world applications. The impact is clearest when students mention specific skills: “You have to have a good credit score to do anything really,” one student writes. Others note a mindset shift, explaining that the class “made me think more about my future with money” or helped them “realize that my parents do a lot for me.” Students who had previously felt stress about finances expressed relief at finally receiving guidance, with one saying, “I stress about this stuff so it’s nice to have someone there to ask questions and teach me.” Even those who are less engaged acknowledge the value of practical preparation, saying, “This class can be used even when I leave school,” or, “It will help me live a comfortable life.” Additionally, as illustrated by Figure 16, students in standalone courses report relatively higher levels of confidence: 39% of standalone students report being “a lot more confident” in making money decisions, compared to 19% of embedded students.

Figure 16: Student Responses to "Do you feel more confident making money decisions now?" , by Course Format



Instructional modality & technology use

Instructional modality and technology use refer to the mix of delivery formats, online resources, and digital tools that educators select to teach financial concepts. Interview evidence suggests that thoughtful integration of videos, simulations, and apps can boost interest and comprehension, although the benefits vary widely with context and implementation.

Many educators value a diverse toolkit. One explains, "I use five different curricula and pull from a lot," while another highlights short, three-minute videos that boost engagement and literacy by providing fresh voices in the classroom. A common theme is educators preferring concise video segments that fit a clear lesson arc. Interactive platforms such as Kahoot and budgeting apps are also recognized as being effective. Educators describe how these activities "simulate what job they'll have, how much they'll make, then find a place to live, buy a car" and generally help students understand real-world applications.

Games and simulations, though popular, elicit mixed reactions among educators. One cautions that "complex trading, investing, and stock market games took weeks of time," a luxury that short or embedded courses often cannot accommodate. Another observes that students "got very little tangible benefit" when the game's mechanics took precedence over essential concepts. Educators therefore stressed that digital tools must serve pedagogy, not replace it; videos, apps, and simulations are viewed as most effective when woven into a coherent instructional sequence.

Instructional modality & technology use

Infrastructure and access also shape student learning. Educators in lower-income communities report unreliable Wi-Fi or limited access to internet-connected devices, with one noting challenges "even conducting any online activities at all." Such constraints mean that some higher-tech resources, presumably meant to aid in learning, may actually widen economic-based learning gaps across students and schools.

"There were fun videos and activities instead of a boring lecture," one middle-schooler says.

Student surveys confirm both the promise and the pitfalls of classroom technology. "There were fun videos and activities instead of a boring lecture," one middle-schooler says, while a high-schooler appreciates that "our teacher assigned fun assignments into the curriculum." Simulations, group projects, and visual tools help make complex concepts more digestible. Yet students are quick to criticize passive or disconnected uses of technology. "Videos were boring, and there was very little real-life application," one notes, and another complains, "Mostly just words. No math."

All insights in this section come from qualitative descriptions provided by educators and students. Although this study did not measure the impact of specific tools on learning outcomes, these accounts nonetheless indicate that digital resources are most effective when they complement clear objectives, accommodate local infrastructure, and remain closely linked to students' lived experiences.

Conclusion

The qualitative findings highlight how financial education is shaped not only by course structure, but by the people, resources, and context surrounding instruction. Longer contact hours, confident and well-prepared educators, and developmentally appropriate, relevant content consistently contribute to deeper engagement and learning. Yet the variability in implementation, driven by staffing assignments, instructional time, training access, and local constraints creates uneven experiences across schools and student populations. These differences help explain the outcome patterns observed in the quantitative data and point to a central insight: improving financial education requires attention not only to what is taught and for how long, but to how and under what conditions learning takes place.

Summary of key findings

This study is centered around one core question: is there a difference in efficacy between standalone and embedded financial education courses?

The quantitative analysis shows that students in standalone courses post higher scores for knowledge, interest, and confidence in personal finance compared to students in embedded courses. The knowledge advantage disappears once educator experience and instructional time are held constant, which indicates that these two factors, not course format itself, drive the differences in student learning across course formats. Put another way, embedded courses can reach student knowledge outcomes comparable to standalone courses when they incorporate similar levels of financial education contact hours and have educators with comparable levels of experience with financial education. However, student confidence and interest in financial matters remain higher in standalone formats even after factoring in key differences across course formats.

The qualitative findings shed light on why interest and confidence are higher in standalone settings. Longer contact hours let educators use project work, personal stories, and guest speakers, which students describe as relevant and motivating. Educators in embedded courses report that tight schedules and limited training often force them to skim the surface of key topics.

Additionally, student learning in embedded courses benefits significantly from increased contact hours, with gains starting around 30 hours, and from more teacher experience with financial education. Ensuring sufficient instructional time and supporting teacher expertise therefore allows embedded formats to deliver effective financial education to students who may not have the option to take a standalone course.

In short, instructional quality, time on task, and perceived relevance are significant drivers of efficacy. Standalone courses are more likely to meet these conditions, which explains their stronger performance in student learning, engagement, and confidence. With sufficient time and support, educators teaching financial education in an embedded format can achieve comparable financial literacy levels as standalone courses, though they remain more vulnerable to lower student interest and confidence.

Recommendations

These recommendations draw on three evidence sources: a systematic review of the financial-education literature, quantitative analysis of student assessment results, and qualitative insights from educator interviews and focus groups across Washington State. Together, these data sets reveal consistent factors that promote effective and equitable financial education. The recommendations identify priority areas for improving instruction, professional support, and enabling policies, while intentionally avoiding prescriptive directives to any single stakeholder group. The research team offers these evidence-based recommendations with trust in educators, policymakers, and partners to interpret and apply them thoughtfully, with attention to local context, equity, and care. For further information, see Appendix section A.

Instructional content & delivery

- When resources allow, offer standalone financial education courses.

  Evidence: Students enrolled in standalone courses score better on knowledge assessments and report significantly higher confidence and interest in personal finance than students in embedded courses. Research shows that increased interest and confidence drives stronger life outcomes.

- When using embedded course delivery, ensure a minimum number of contact hours (at least 30-60 recommended) dedicated to financial education.

  Evidence: Student learning significantly increases in embedded courses as contact hours increase, particularly at 30 and then again at 60 contact hours.

- Use active learning tools, simulations, digital apps, case studies, and projects that mirror real-life decisions, but link each activity to a clear learning target. Confirm every student can access the technology, and close with debriefs on common pitfalls so confidence gains translate into sound judgment.

  Evidence: Classrooms using interactive strategies showed the strongest jumps in confidence and engagement; simulations tied to explicit objectives produced even larger confidence gains, yet without debriefs they sometimes fostered overconfidence and risky decision-making.

- Frame lessons with scenarios that align with students' lived experiences, such as first jobs and used car ownership.

  Evidence: Educators with the highest scoring students integrated real-life scenarios into their instruction.

- Schools and educators should cultivate cross-sector partnerships to provide experiential learning to students and industry expertise for educators.

  Evidence: In interviews, educators reported that Career and Technical Education (CTE) designated courses enjoyed larger budgets and relied on industry partners to enrich instruction and supply professional development.

Educator capacity & supports

- Provide targeted professional development for new financial education educators, whether teaching embedded or standalone, and include a budget for substitute coverage or stipends so that educators can attend professional development training and events.

  Evidence: Educators with more experience teaching financial education reported greater instructional ease, and their students achieved higher scores; educators who could not attend professional development cited time, funding, and substitute coverage as key barriers.

- Establish mentorship structures that pair less-experienced financial education educators with veteran colleagues.

  Evidence: Educators shared the most helpful support they could receive was a mentor with experience in financial education.

- Create space for reflective teaching practices by offering educators a voluntary, open-ended conversation each year about their instructional approach.

  Evidence: Educators described this study's interview as one of their most meaningful professional learning experiences, highlighting the value of non-evaluative reflection on classroom strategies and goals.

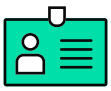
- Continue to support the Washington Financial Education Public-Private Partnership (FEPPP) to ensure it can effectively vet curricula, expand professional learning opportunities for educators, and provide classroom support as the state advances toward making financial education a graduation requirement.

  Evidence: Educators most often cited a lack of professional development dollars and substitute coverage as barriers, and veteran instructors pointed to FEPPP and its resources as critical to classroom quality.

- Develop and fund participation in on-demand, standards-aligned, micro-credential modules (5-10 hours each) in core personal finance topics such as budgeting, credit, investing, risk, post-secondary planning; award clock hours so educators in any subject area can build content strength at their own pace. This intervention is particularly critical for new educators teaching financial education in the embedded course format.

  Evidence: Financial education is delivered by educators from diverse disciplines (e.g., math, social studies, business, family and consumer sciences, and health) and many newly assigned embedded educators reported having little prior training in the subject. The more

financial education experience an educator has, the better the observed outcomes their students achieve. New educators and embedded educators often have insufficient experience beforehand.



Student access & equity

- Provide differentiated materials and support for multilingual learners, students with disabilities, those with less strong math skills, and those with limited technology access.

  Evidence: Educators noted that these students struggled to participate fully in interactive lessons when supports were absent, resulting in lower engagement and confidence.

- Introduce foundational personal finance topics in upper-elementary or middle school to standardize early exposure.

  Evidence: Students who had already taken a personal finance class, or even reported thinking about money, prior to taking financial education scored higher on the knowledge assessment, demonstrating the value of financial education earlier in schooling.

- Audit participation and outcome data, especially if courses are optional, in order to assess and address disparities.

  Evidence: When variation in performance was noted by educators, it was often qualitatively observed to be related to factors of geography, demography, and socioeconomic context.

- Offer professional learning on trauma-informed facilitation, helping educators handle sensitive money topics that may surface as students explore personal finance.

  Evidence: Educators frequently reported in interviews that students brought up difficult or personal conversations in their financial decisions and in the classroom, related to financial trauma and their home lives.

- Establish financial education resources that have been reviewed with an equity lens; when framing lessons with scenarios that align with students' lived experiences, pay special attention to students of diverse backgrounds.

  Evidence: Students from underrepresented backgrounds often found decreased real-life applicability in financial scenarios.

Systems & policy enablers

- Publish and disseminate a recommended scope-and-sequence template to reduce repetition and close content gaps reported by educators, especially for embedded courses.

  Evidence: Educators pointed to a lack of structured guidance in embedded courses, noting that inconsistent, incomplete local curricula made it hard to gauge students' prior exposure and to tailor lessons for classes with varied experience levels.

- Allocate dedicated funding for curriculum adoption, professional learning, and classroom resources.

  Evidence: Educators cited limited budgets and the lack of substitute coverage as primary barriers to active learning and ongoing training.

- Implement financial education curriculum before high school to build foundational knowledge prior to high school in order to increase confidence, interest, and knowledge outcomes.

  Evidence: Prior exposure to personal finance was linked to higher student confidence and sustained interest.

- Create a test-only endorsement pathway for personal finance, phased in with certification requirements to build educators' financial expertise, and subsidize or host regional centers and online prep so that rural and low-capacity districts can upskill staff, reducing the risk that certification pathways concentrate expertise in wealthier areas.[7]

  Evidence: Student outcomes were strongest in classrooms led by educators with prior financial education training, indicating a need to broaden specialized training and credential pathways while ensuring equitable access statewide.

The study shows clear pathways toward wider access to financial education yet also reveals persistent gaps in time, training, and resources. Implementing these recommendations will require coordinated effort across districts, state agencies, community partners, and industry stakeholders. Ongoing monitoring of participation, instructional quality, and student outcomes will be essential to track impact and refine approaches. By using the evidence to guide collective action, Washington can move closer to ensuring that every student receives rigorous, relevant, and inclusive financial education.

Future research questions

This study provides a snapshot of current financial education practices and outcomes, but important evidence gaps persist. The following sections outline these gaps and pair each with a guiding research question designed to inform equitable and effective policy and practice. Further concerns can be found in Appendix section C.

Equity-focused evidence gaps

Equity is central to the ambition of universal financial education. Households experiencing financial precarity are more exposed to predatory lending, high-cost credit and economic volatility, and therefore stand to gain the most from effective instruction (Shanbhag, 2022). At the same time, poorly designed or unevenly implemented programs can reinforce rather than reduce disparities, widening gaps by favoring students with more resources or financial

[7] For more information on test-only endorsements, see: https://ospi.k12.wa.us/certification/teacher-certificate/already-washington-certified-educators/adding-endorsement

experience. The avenues for further research that follow are framed with this concern in mind.

The study's data collection was limited by the budget and timeline attached to state funding. Gathering student-level demographic information would have required a more extensive research-ethics review and additional agreements with participating schools, which were not feasible within the project window. As a result, the analysis cannot test how outcomes vary by student race, ethnicity, income or other characteristics, making these equity-related questions a priority for future research.

- **Digital access and tool readiness**
  - Many recommended tools such as Kahoot, EverFi and Next Gen Personal Finance simulations rely on stable internet connections and personal devices. In districts with limited broadband or shared hardware, students may be unable to participate fully.
  - **Research question:** How do infrastructure disparities shape students' ability to benefit from digital financial-education tools, and which offline or low-tech alternatives provide comparable outcomes?

- **Structural financial constraints in instruction**
  - Most courses emphasize that financial success is derived from personal responsibility, highlighting individual budgeting and saving. However, students in marginalized communities also encounter systemic barriers like discriminatory lending practices and regressive taxation. When instruction ignores these external forces, learners may view the content as irrelevant or financial recommendations as unattainable.
  - **Research question:** Does teaching about structural financial inequities influence student trust, engagement, and confidence in applying financial concepts?

- **Family and community reinforcement**
  - Financial behaviors are often modeled at home. Students from lower-income households frequently report limited or negative financial socialization, which can diminish retention of classroom lessons. Understanding how prior exposure shapes receptiveness is essential for designing effective programs.
  - **Research question:** How does earlier financial socialization experience affect student responsiveness to instruction, and can exposure in elementary or middle grades mitigate disparities later on?

- **Educator endorsement pathways in low-capacity districts**
  - Certification requirements are intended to improve instructional quality, but for rural or under-resourced districts they can reduce the pool of qualified educators if training and testing are inaccessible. This dynamic risks concentrating expertise in wealthier areas.
  - **Research question:** How do certification requirements influence educator availability in rural or under-resourced districts, and which support models ensure equitable access to endorsement pathways?

Implementation-focused evidence gaps

Effective policy depends on more than thoughtful design; it requires the resources, oversight and day-to-day practices that carry intentions into classrooms. Differences in funding levels, staffing capacity and monitoring systems mean that the same requirement can generate markedly different experiences for students and educators. The following evidence gaps focus on where implementation processes, rather than policy content, may limit the reach or consistency of financial education.

- **State mandates and follow-through**
  - Many states require K–12 financial literacy, but some provide little funding, limited training and few accountability measures. Districts may comply in name only due to their resource constraints, leaving instruction uneven and difficult to evaluate.
  - **Research question:** How do variations in funding, training support and accountability mechanisms affect implementation quality across districts operating under state mandates?

- **Educator assignment and motivation**
  - Financial education classes are often assigned according to timetable needs rather than educator interest or expertise. Evaluations that rely on unusually motivated instructors may overstate typical program effectiveness.
  - **Research question:** Which professional development and support strategies enable educators who are assigned to financial education to deliver instruction on par with self-selected colleagues?

- **Course status: elective versus graduation requirement**
  - Whether a financial education course counts as an elective or as a required credit can influence who enrolls, how seriously students take the material and how schools allocate instructional resources. These differences may shape both participation rates and learning outcomes.
  - **Research question:** How do student outcomes differ when financial education courses are offered as electives compared with when they are required for graduation?

- **Curriculum intensity and mathematical integration**
  - Some programs frame personal finance through a mathematical lens—emphasizing compound interest, ratios and quantitative problem-solving—while others focus more on behavioral or decision-making skills. The balance of math content may affect accessibility for students with varying numeracy levels and could influence knowledge retention.
  - **Research question:** How do learning outcomes differ between curricula with a strong mathematics component and those that adopt a less math-intensive approach?

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Appendix

A. Audience specific implications

This mixed-methods study pinpoints practice and policy moves that can raise the quality and reach of K-12 financial education across Washington. The insights below translate the evidence into concise guidance for four key audiences.

K-12 Educators

Instructional choices shape what students know, believe, and can do with money.

Instructional time and scope

- The data show that embedded units begin to lift knowledge only after about thirty contact hours, with markedly stronger gains at sixty hours; classes below that threshold leave most students at surface level understanding.
- Sequencing matters: Educators who mapped a grade-by-grade progression reported less reteaching and deeper discussions when students reached complex topics such as credit and investing.

Professional learning and collaboration

- Years of general teaching experience do not predict higher scores, but years teaching personal finance do; educators who pursued content-focused professional development or mentoring posted the largest jumps in student knowledge and confidence.
- Mentorship proved practical and low-cost: veterans said “having someone to call” on lesson pacing transformed their practice, while novices without support relied on worksheets and felt unprepared.

Engaging and equitable pedagogy

- Simulations, budgeting apps and project work consistently raised interest when every activity was tied to a clear learning goal and closed with a debrief that surfaced common mistakes; without that structure, some students left overconfident.
- Students from multilingual, special-education or low-tech settings engaged fully only when educators added visuals, step-by-step supports and off-line alternatives, underscoring the need to differentiate resources before the unit starts.

Policymakers

Legislation, funding, and oversight set statewide access and quality.

Mandates and funding

- Link any graduation or course requirement to a minimum of thirty contact hours and budgeted professional learning; without both elements, embedded courses lag on knowledge and confidence.

- Recurring appropriations to the Financial Education Public-Private Partnership let it vet curricula, deliver training and coach districts, activities veteran educators credited as "critical to classroom quality."

Equity and infrastructure

- Require annual public audits that track participation and outcomes by geography and income so gaps surface early and resources can be targeted.
- Broadband and device grants matter: educators in low-income districts described "even conducting any online activities at all" as a challenge, which blunted the benefits of high-engagement digital tools.

Educator pipeline

- A subsidized, test-only endorsement pathway plus regional prep centers would let rural or low-capacity districts upskill staff without losing them to semester-long coursework, addressing the concentration of expertise in wealthier areas.
- State-funded trauma-informed training equips educators to handle sensitive money topics that frequently surface in high-poverty classrooms.

K-12 Administrators

Scheduling, staffing and resources determine whether learning remains surface or becomes deep.

Scheduling and staffing

- Where timetables permit, standalone courses (median ≈ 140 contact hours) provide the depth students describe as "one of the most important and interesting classes" they have taken; if embedding, guarantee at least thirty hours and adopt a shared scope so units do not feel "basically pointless."
- Assign finance to educators with content interest; in the study, classes led by reassigned staff without training saw lower engagement and comments such as "they don't really understand."

Professional support

- Budget for substitute coverage or stipends so staff can attend professional development; lack of funds was the most cited barrier, and classes with trained educators were described as "fun" and "digestible."
- Formalize PLCs or mentoring pairs: most high-performing educators had a finance background and still relied on peer dialogue to keep examples current and pacing tight.

Data and infrastructure

- Track knowledge, interest and confidence by subgroup each term; administrators who acted on these data (for example adding extra hours or bilingual supports) closed gaps more quickly.
- Audit Wi-Fi, devices and classroom tech before adopting simulations so tool access does not widen learning disparities.

Nonprofits and financial-services institutions

External partners supply curricula, expertise, and funding that extend classroom capacity.

Resource alignment

- Map donated curricula and digital tools to state standards and the thirty-hour benchmark so educators can slot materials directly into existing sequences rather than "pull from five different sources."
- Coordinate through the Financial Education Public-Private Partnership (FEPPP) to scale resources statewide and avoid duplication, especially as districts prepare for a potential mandate.

Capacity building for educators

- Offer on-demand micro-credential modules (5–10 hours) in budgeting, credit, investing and risk; educators newly assigned to embedded units reported little prior training and valued flexible professional development they could finish "at their own pace."
- Provide guest speakers, mentorships and real-world case studies, students consistently linked outside experts to higher motivation and clearer career relevance.

Equity partnerships

- Underwrite licenses, devices or broadband for under-resourced schools so every student can participate in interactive lessons, not just those with home connectivity.
- Review scenarios through an equity lens; students from diverse backgrounds flagged that generic examples sometimes felt irrelevant, blunting engagement.
- Train volunteers in trauma-informed facilitation to safeguard classrooms where money topics can trigger stress or disclosure of hardship.

B. Study methodology

This section outlines the study design, including educator recruitment, data collection methods, ethical procedures, and analysis approach. The study examined how financial education is taught across Washington State and explored differences in instructional models. Data collection included educator interviews and student assessments, and student and educator surveys, providing both qualitative and quantitative insights to inform the study's findings.

Outreach & recruitment

In order to establish a survey base for this study the Center for Economic and Financial Education (CEFE) and Washington Council for Economic and Financial Education (WACEFE) inquired whether educators might be interested in participating in a study on financial education. The research team conducted outreach in the manner of general interest surveys to schools via email, direct

contact with the district leaders, contact with the State Tribal Impact Council at the Office of the Superintendent of Public Instruction (OSPI), and contact with Washington State legislators asking them to share the study participation details with their schools. The research team also reached out to educators already connected to the WACEFE network.

The following educator associations, ones that often include financial education educators, were contacted and asked to advertise the study: Washington CTE Association, Washington State Council for the Social Studies, Washington Educators of Business and Marketing, the Washington Association of Family and Consumer Sciences Educators, and FEPPP. A second round of outreach was done to include schools and districts that appeared underrepresented in the initial survey responses.

Educator selection

Educators who listed themselves as interested were invited to participate in the selection process. Participating educators were directed to complete a form detailing their teaching and financial education experience. Any educator actively detailing their teaching and teaching financial education in middle or high school was selected, and those who obtained principal or administrator approval ultimately participated.

After outreach, 60+ educators were interested in participating. Upon removing educators whose administrators did not approve participation, 39 educators were recruited from 30 unique schools across 25 districts. Of those educators, six middle and 33 high school educators were represented in the study, some with multiple classes or sections and instructing students from grades 6–12.

In an effort to ensure study diversity, the research team sought to work not only with educators with varying degrees of financial education experience, but with varying teaching modalities for their financial education classes. Of the 45 classes studied, 26 were standalone, most being described as personal finance or financial math, and 19 were embedded classes, with topics ranging from independent living to AP world history to traffic safety. Material was a mix of independently developed curriculum and outside resources from organizations like Advancement Via Individual Determination (AVID), Next Gen Personal Finance (NGPF), and others.

Research ethics

To ensure ethical research practices, the research team followed all relevant protocols for informed consent and institutional oversight. The study was reviewed and approved by Western Washington University's Human Research Protections Program (HHRP) under protocol #11468EX25.

For schools and districts requiring additional review of the research study's practices, research applications were submitted and approved in Lake Washington, Highline, Bellingham, and Colville. Participating schools also provided letters of permission signed by principals or district administrators. All research analysts completed a Social and Behavioral Research course through the Collaborative Institutional Training Initiative (CITI), as required by Western

Washington University.

Educators participating in interviews were invited to provide verbal consent after being read a statement outlining the study's purpose, potential risks and benefits, confidentiality protections, incentives, and rights to withdraw. Consent was reaffirmed at the start of each interview, and educators had the option to opt out of transcript use.

The same information was provided at the start of the educator survey, where participants could choose to confirm or decline consent. Students and educators could opt out of any and every survey question, and an opt-out form was sent to all parents and guardians to allow them to decline their child's participation in advance. Student surveys included a pre-survey description of the study and were conducted anonymously. As a result, no personally identifiable student data was collected.

Assessment design, delivery & analysis

The student assessment was structured around the "Big Five" and "Big Three." These five- three-item questionnaires, respectively, are internationally recognized for eliciting financial knowledge and cover the topics of earning, saving, spending, borrowing, and protecting. All items were aligned with Washington State's K–12 financial education learning standards to ensure relevance and consistency.

Participating students completed a two-part assessment: the first section covered their knowledge of financial education material, and the second focused on their experience with the class and how it changed their understanding of the subject matter. The first section, comprising 15 questions in both multiple choice and true/false format, focused largely on topics relating to everyday personal finance skills — e.g., prudent budgeting, saving, investing, and avoiding common financial pitfalls and debt. The second section, comprising 20 questions in multiple choice and written form, focused on providing feedback to educators and gauging students' prior knowledge, interest, and learning progression. The assessment was designed to be accessible to students regardless of their math proficiency, focusing instead on conceptual understanding.

All student assessments were administered in spring 2025, at the end of students' financial education courses. These included year-long, semester-long, and embedded instructional formats. Assessments were administered electronically. Educators were instructed to clarify that the assessment would not be graded and that the results could inform educational policy. Students were suggested to be given 20 minutes, with flexibility for additional time if needed. Students who were absent were given opportunities to complete the assessment later.

Across all participating schools, nearly 2,000 students were invited to take part, and 1,588 individual responses were collected. Student responses were cleaned, combined with school-level data from OSPI, and then analyzed. First, descriptive statistics were created for the overall sample to describe student-, class-, and school-level characteristics. The sample was then divided based on the format in which financial education content was delivered: standalone or embedded. Average student outcomes and class characteristics were compared, revealing statistically significant gaps across course formats. Next, the standalone-embedded

gap in three student outcomes (overall score, interest, and confidence) were analyzed in a regression framework to (a) test the robustness of these gaps to the inclusion of various student-, class-, and school-level control variables and (b) determine the key factors that predict student success. Lastly, the predictive power of these key factors were allowed to vary across course formats, again in a regression framework, to reveal the course-format-specific characteristics that lead to better financial literacy.

Interview methodology

To gather qualitative data, the research team conducted standardized interviews with each participating educator. Interviews were held via virtual meeting platforms, with phone interviews available upon request. In addition to live interviews, electronic survey forms were used to collect open-response data from educators.

The interview protocol was designed to capture a range of perspectives on course structure, instructional practices, student engagement, and perceived outcomes. Questions focused on how financial education was delivered, what resources were used, and what challenges or opportunities educators identified in their context.

To support consistency, interviews followed a shared question guide, and responses were recorded for analysis with participant consent. Interview notes and transcripts served as primary data sources for the qualitative portion of the study.

All educator interviews were conducted during spring 2025. Educators were reminded that participation was voluntary and that they had the option to decline to answer any and every question. To ensure consent was maintained throughout the process, educators were invited to offer verbal consent after being read a document that addressed the purpose, risks, benefits, incentives, confidentiality, and rights to withdraw. At the beginning of each interview, the goals of the study were reiterated, and educators were asked to reaffirm consent. Educators were also given the option to opt out of the use of interview transcripts. Additionally, in the online survey, educators were presented with the same information and asked to offer or rescind their consent to participate. Interview data was anonymized in reporting.

Qualitative data analysis

A two-phase qualitative coding process was applied to analyze both educator interviews and open-ended responses from student and educator surveys.

In Phase 1, open coding was conducted by identifying short, descriptive codes (2–5 words) from participant excerpts and survey responses. These codes were grouped into broader, clearly defined themes. Similar codes were merged to maintain consistency and reduce redundancy. The codebook was refined iteratively to reflect patterns across transcripts and survey entries.

In Phase 2, axial coding was used to map relationships between themes. Relational labels such as “Enhances,” “Constrains,” or “Depends on” were applied to explain how instructional and systemic factors interacted. These relationships were reviewed and adjusted throughout the

process to ensure clarity and alignment.

To ensure consistency across data sources and prevent variation in interpretation, all coding was conducted by a single analyst.

C. Study limitations

Several limitations should be considered when interpreting the findings of this study, which are outlined below.

Study sampling

The study was not based on a randomized, representative sample. Educator participation was voluntary and subject to administrator approval, which may have introduced self-selection bias. As a result, the sample may reflect educators who are particularly interested or invested in financial education. Middle school representation was limited—only six middle schools participated, and only one class included 6th grade students. While the study aimed to capture a range of course formats and contexts, the sample may not fully reflect the diversity of financial education programs across Washington State.

Class selection & assignment

Student class selection, why students chose or were placed into their financial education class, was not tracked. Some classes were assigned to students without their input, while others were electives that either fulfilled a graduation requirement or did not. Additionally, some classes were offered as embedded financial education within an AP class. These eventualities were neither extensively documented nor controlled for in the analysis. The results may not fully reflect any impact these factors had on interest, motivation, or scores.

Timing & data collection

Student assessments were conducted in spring 2025, at the end of participating financial education courses. While the timing aligned with the conclusion of year-long, semester-long, and embedded courses, variation in instructional pacing or course duration may still affect how students responded to the assessment.

Lack of demographic data

The research team deliberately chose not to collect demographic information on students or educators. Including variables such as race, gender, or socioeconomic status, as this would have shifted the project from an expedited Institutional Review Board (IRB) review to a full-board review, adding significant time and administrative requirements that were not feasible within the study timeline.

The IRB also advised limiting data collection to protect participant privacy. In several small or

rural schools, detailed demographic variables could have made individual students or educators identifiable, violating the minimal-risk standard of the expedited review. By omitting these items, the researchers ensured that the dataset remained non-identifiable.

Adding demographic questions would have required additional consent forms and disclosures, increasing the burden on educators, students, and families. Additionally, the research team prioritized limited burden on school partners' capacity and took into account educators' competing end-of-year obligations, so a concise process was prioritized to maintain participation rates while upholding ethical standards.

Finally, the evaluation was designed to examine overall patterns of instructional practice and student learning within the available resources. Conducting detailed subgroup analyses would have required additional demographic data collection and methodological adjustments beyond the study's scope.

Participant opt-out and incomplete responses

In accordance with informed consent protocols, students and educators were allowed to opt out of any and all questions on the surveys and assessments. While this approach was intentional and ethical, it may have contributed to incomplete datasets for certain questions, limiting the ability to compare responses across the full participant group.

Interpretation of student assessment results

While student assessment data is cited in the report to illustrate differences across instructional models, these findings should not be interpreted as evidence of causality. The sample was not randomized, and many unmeasured variables, such as educator preparation, student demographics, and course scheduling, may also influence student outcomes. Although the analysis sought to identify patterns, stronger outcomes observed in standalone courses may be shaped by multiple confounding factors.

Other considerations

The study relied on self-reported information from educators and students, which may introduce recall bias or subjective interpretation. Efforts were made to validate and cross-reference data, but the findings reflect the limitations of both the sample and the tools used.

D. About the sample

The section below demonstrates how a deliberately varied sample underpins the accuracy, neutrality, and applicability of the study's findings.

Sample construction

The study intentionally included educators who differed by course format, school level,

geographic locale, district, and demographic context. Aligning these characteristics with Washington's broader student population limits selection bias and improves external validity. The resulting diversity supports credible cross-group comparisons and ensures that findings speak to a wide range of educational settings and policy questions.

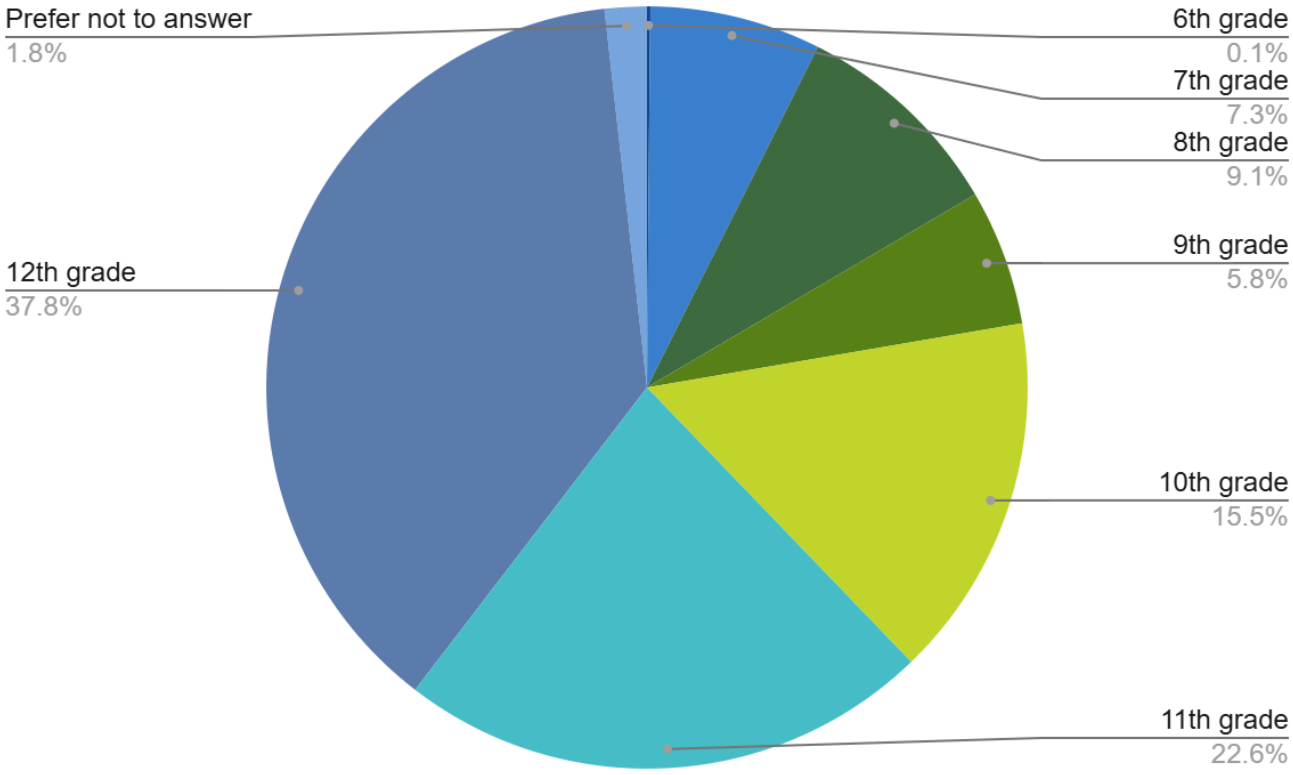
Course format and level

Twenty-three educators deliver stand-alone personal-finance courses and 16 embed the content in other subjects. Thirty-two teach high-school students, 6 teach middle-school students, and 1 level is unreported. Classroom rosters total n=2,423 students, 1,515 in stand-alone courses and 908 in embedded formats, covering every secondary grade. See Appendix Figure 3 below.

Grade level

The student population for this study consisted of the following: 12th grade, n=571 students; 11th grade, n=324 students; 10th grade, n=234 students; 9th grade, n=87 students; 8th grade, n=138 students; 7th grade, n=110 students; 6th grade, n=2 students. A visualization can be seen in Appendix Figure 1.

Appendix Figure 1: Grade Level Representation of Participating Students



Socioeconomic mix

The study draws on n=30 schools. Eight campuses hold Title I status while 22 do not, giving voice to both ends of the socioeconomic spectrum. Free and reduced-price lunch eligibility ranges from 12.1 to 90.7 percent, with a median of 44.6 percent. The low-income index spans 13.5 to 86.0 percent, with a median of 47.6 percent. Because the full socioeconomic continuum is represented, conclusions apply across funding tiers.

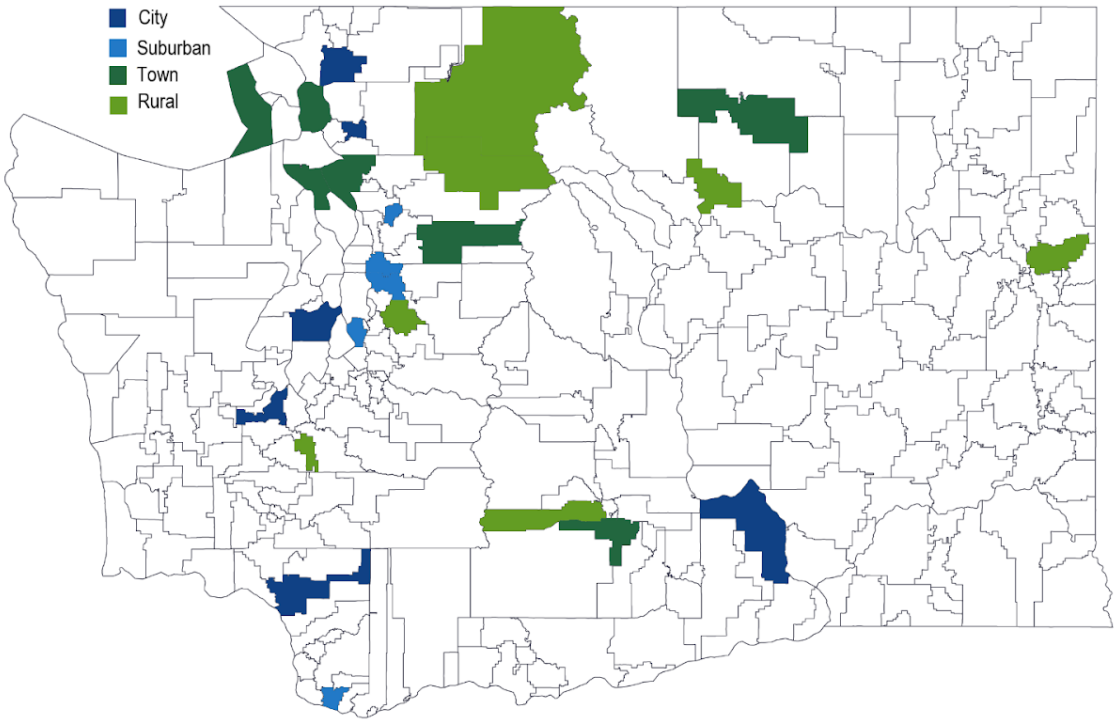
Student diversity

Students of color constitute 16.5 to 99.1 percent of enrollment, with a median of 36.4 percent. Native-American representation extends from 0.0 to 12.9 percent, with a median of 0.8 percent. This breadth captures majority-minority urban campuses and small rural schools alike, supporting responsive applications.

Locale coverage

Districts on both sides of the Cascades contribute city, suburban, town, and rural schools. This results in geographic reach that guards against regional bias and ensures statewide policy applications remain credible. See Appendix Figure 2.

Appendix Figure 2: Participating School Districts, by Urbanicity



Appendix Table 1: Demographic and School Characteristics of Participating Sites

School; District	Title I Status	% Free/ Reduced Lunch	% English Learners	% Native	% Minority	% Low Income	Locale	Student-to-FTE Ratio	Per-Student Spending (USD)
Anacortes High School; Anacortes School District	No	27.2	2.5	0.9	26.5	27.2	Town, Fringe	19.75	$20,160
Brewster High School; Brewster School District	Yes	87.6	23.4	1.2	89.7	86	Rural, Remote	21.23	$16,311
Capital High School; Olympia School District	Yes	37	3.5	1.2	40.9	41.8	City, Small	21.54	$17,438
College Place High School; College Place Public Schools	Yes	54.3	15.1	0.4	48.5	51.3	Suburban, Small	16.67	$18,439
Concrete High School; Concrete School District	No	85.7	7	2.6	25	85.5	Rural, Distant	14.09	$24,395
Coupeville High School; Coupeville School District	No	36	2.5	1.4	32.8	33.9	Town, Distant	16.02	$20,663
Darrington High School; Darrington School District	No	49.1	0	2.6	25.4	59.9	Rural, Distant	12.53	$27,731
Fairhaven Middle School; Bellingham School District	No	44.6	6.6	0.8	32.9	39.9	City, Small	17.89	$17,779
Friday Harbor High School; San Juan Island School District	No	41.6	7.8	1.2	26.4	39.1	Town, Distant	17.44	$21,298
Heritage High School; Evergreen School District	No	90.7	18.7	0.4	55.3	47.6	Suburban, Midsize	20.6	$17,617
Huntington Middle School; Kelso School District	No	72.3	7.3	0.9	32.9	65.2	City, Small	18.65	$16,561
Innovation Lab High School; Northshore School District	No	12.1	2.7	0.4	31.7	13.5	Suburban, Large	13.93	$25,199
Island County Juvenile Detention Center*; Coupeville School District	Yes	-	-	-	-	-	Town, Distant	-	-
Issaquah High School; Issaquah School District	No	15.4	5.6	0.2	54.4	16.2	Rural, Fringe	22.63	$16,086

** Data not available*

School; District	Title I Status	% Free/ Reduced Lunch	% English Learners	% Native	% Minority	% Low Income	Locale	Student-to-FTE Ratio	Per-Student Spending (USD)
Kulshan Middle School; Bellingham School District	No	31.9	3.8	0.7	26.8	27.8	City, Small	18.32	$18,256
Lake Stevens High School; Lake Stevens School District	Yes	31.7	4.6	0.5	40.2	31	Suburban, Midsize	24.31	$16,541
Lake Washington High School; Lake Washington School District	No	15	7.5	0	49.6	13.6	Suburban, Large	20.96	$16,612
Mt. Spokane High School; Mead School District	No	33.2	3.6	0.5	16.5	34.6	Rural, Fringe	20.07	$16,013
Northwest Career And Technical Academy; Mount Vernon School District	No	42.9	0	3.3	50	73.3	City, Small	2.9	$16,622
Options High School; Bellingham Public Schools	No	57.3	3.3	2.2	25	55	City, Small	10.28	$24,414
Pacific Crest Online Academy; Richland School District	No	54.8	7	0.3	39.2	48.3	City, Small	18.05	$14,952
Pacific Middle School; Highline School District	No	76.7	43.7	0.2	86.3	75.3	Suburban, Large	18.77	$20,856
Rainier High School; Rainier School District	Yes	50.6	0.3	1.4	22	49.8	Rural, Distant	17.8	$17,730
Sehome High School; Bellingham School District	No	29.2	5.3	0.7	29.5	28.3	City, Small	23.27	$17,517
South Kitsap High School; South Kitsap School District	No	43.2	3.1	0.8	36.4	43.6	City, Small	20.6	$19,197
Stanwood High School; Stanwood-Camano School District	No	32.8	3.4	1.2	25.9	30.9	Town, Fringe	23.56	$17,659
Sultan High School; Sultan School District	No	54.6	10.9	0.3	41.5	49.7	Town, Distant	20.99	$18,722
Wapato High School; Wapato School District	Yes	88.3	45.1	12.9	99.1	86	Town, Fringe	18.15	$20,610

School; District	Title I Status	% Free/ Reduced Lunch	% English Learners	% Native	% Minority	% Low Income	Locale	Student-to-FTE Ratio	Per-Student Spending (USD)
Washington Virtual Academy Omak High School; Omak School District	No	53.4	2.9	1.1	42.2	68.9	Town, Remote	31.4	$12,307
West Valley High School; West Valley Yakima School District	Yes	49.7	7.4	0.7	48.8	51	Rural, Fringe	23.27	$14,511

E. Educator survey

Below is the complete survey given to educators.

Western Washington University is conducting research to learn how students and educators experience financial education—how it's being taught, what's working, and what could be improved. This research is part of the Financial Education Efficacy Study (Study #11468EX25), in partnership with WACEFE.

The purpose of this survey is to gather any final insights from educators about their experiences with financial education to inform strategies for improving instruction in schools.

Your participation is voluntary. You may skip any question by selecting "Prefer not to answer."

Your responses will be anonymized and aggregated to ensure confidentiality.

1. What is your first name? [Text box]
2. What is your last name? [Text box]
3. How is financial education structured in your current teaching role?
   - ○ Standalone course (an independent course focused only on financial education)
   - ○ Embedded course (financial education is included within another subject)
   - ○ Both
   - ○ Prefer not to answer
4. How many embedded financial education courses do you currently teach?
   - ○ One
   - ○ Two
   - ○ Prefer not to answer

Embedded Course #1

5. In which subject was the financial education content embedded?
   - ○ Mathematics
   - ○ Economics
   - ○ Business & Marketing
   - ○ Social Studies / History
   - ○ English / Language Arts
   - ○ Family and Consumer Sciences
   - ○ Computer Science / Technology
   - ○ Advisory / Homeroom
   - ○ Other (Please write your answer)
   - ○ Prefer not to answer

6. How much of the total course time was allocated to financial education in your embedded course?
   - ○ Less than 10%
   - ○ Between 10% and 25%
   - ○ Between 25% and 50%
   - ○ Between 50% and 75%
   - ○ Between 75% and 100%
   - ○ Prefer not to answer

7. How many student contact hours were devoted to teaching financial education content in your embedded course?
   - ○ 0–20 hours
   - ○ 21–40 hours
   - ○ 41–60 hours
   - ○ 61–80 hours
   - ○ More than 80 hours
   - ○ Prefer not to answer

8. What topics were most emphasized in your embedded financial education content? (Select up to three)
   - ○ Budgeting
   - ○ Saving
   - ○ Investing
   - ○ Credit and debt management
   - ○ Taxes
   - ○ Insurance
   - ○ Financial planning
   - ○ Other (Please write your answer)
   - ○ Prefer not to answer

9. How would you rate student engagement with the embedded financial education content?
   - ○ 1
   - ○ 2
   - ○ 3
   - ○ 4
   - ○ 5

Embedded Course #2 (if applicable)

10. In which subject was the financial education content embedded?
    - ○ Mathematics
    - ○ Economics
    - ○ Business & Marketing
    - ○ Social Studies / History
    - ○ English / Language Arts
    - ○ Family and Consumer Sciences
    - ○ Computer Science / Technology
    - ○ Advisory / Homeroom
    - ○ Other (Please write your answer)
    - ○ Prefer not to answer

11. How much of the total course time was allocated to financial education in your embedded course?
    - ○ Less than 10%
    - ○ Between 10% and 25%
    - ○ Between 25% and 50%
    - ○ Between 50% and 75%
    - ○ Between 75% and 100%
    - ○ Prefer not to answer

12. How many student contact hours were devoted to teaching financial education content in your embedded course?
    - ○ 0–20 hours
    - ○ 21–40 hours
    - ○ 41–60 hours
    - ○ 61–80 hours
    - ○ More than 80 hours
    - ○ Prefer not to answer

13. What topics were most emphasized in your embedded financial education content? (Select up to three)
    - ○ Budgeting
    - ○ Saving
    - ○ Investing

- ○ Credit and debt management
- ○ Taxes
- ○ Insurance
- ○ Financial planning
- ○ Other (Please write your answer)
- ○ Prefer not to answer

14. How would you rate student engagement with the embedded financial education content?
    - ○ 1
    - ○ 2
    - ○ 3
    - ○ 4
    - ○ 5

About Your Year

15. Have you observed any changes in students' behavior as a result of your financial education lessons this year?
    - ○ No changes
    - ○ Minor changes
    - ○ Moderate changes
    - ○ Significant changes
    - ○ Not sure / I don’t know
    - ○ Prefer not to answer

16. Tell us more about how students' behavior changed, if it was minor, moderate, or significant. [Text box]

17. In what ways did this year’s economic news affect your classroom?
    - ○ No effect
    - ○ Minor effect
    - ○ Moderate effect
    - ○ Significant effect
    - ○ Not sure / I don’t know
    - ○ Prefer not to answer

18. Tell us more about how economic news impacted your teaching or students, if minor, moderate, or significant. [Text box]

19. What aspect of your teaching or classroom environment did you reflect on most as a result of being part of this study?
    - ○ My approach to instruction
    - ○ How I engage students
    - ○ How I use data or assessment

- ○ My classroom discussions or norms
- ○ I didn’t reflect much as a result of the study
- ○ Other
- ○ Prefer not to answer

20. Tell us more about your reflection: [Text box]

21. How did your students respond to knowing they were part of a study?
    - ○ They seemed curious or excited
    - ○ They asked thoughtful questions about the study
    - ○ They were indifferent or didn’t engage with the idea
    - ○ They seemed confused or skeptical
    - ○ It was not discussed with students
    - ○ Other
    - ○ Prefer not to answer

22. Did the study raise any questions or ideas you’re still thinking about now?
    - ○ Yes
    - ○ No
    - ○ Not sure
    - ○ Prefer not to answer

23. If yes, what ideas or questions have stayed with you? [Text box]

24. How disruptive was participating in the study to your teaching and time overall?
    - ○ Not at all
    - ○ Slightly
    - ○ Moderately
    - ○ Very
    - ○ Extremely
    - ○ Prefer not to answer

25. Any advice you'd give us for running a future study with educators like you? [Text box]

26. Is there anything else you want to share about your experience with teaching financial education this year? [Text box]

F. Educator interview protocol

Purpose
The purpose of this study is to gather insights from educators about their experiences with financial education to inform strategies for improving financial literacy in schools.

Your participation in this interview is entirely voluntary. You may choose not to answer any question or to withdraw at any time.

Your responses will be kept confidential. We will anonymize and aggregate the responses so that no identifying information will be associated with your input.

Do you understand these instructions, give your consent to participate, and understand that you are welcome to opt out of any question at any time?

Do you consent to the recording of a transcript for accuracy and analysis? The transcript will remain confidential and only be used by the research team. If you prefer not to consent, we can proceed without it.

Participant Background

- Confirm the below information:
  - School/Institution:
  - Grades taught, currently:
  - What financial education course (standalone or embedded) did you teach this spring?:
  - Is this class required, elective, or meet any other requirements for graduation?
  - Other subjects taught, currently (not given on slide deck for some educators):
- Grades taught, previously:
- Subjects taught, previously:
- Years of teaching experience:
- What was your educational background? Did you have a specific subject endorsement for teaching?
- When did you begin teaching financial education? How did you come to teach it? (By choice, asked to, default: lack of other qualified educators, etc.)

Learning Environment

- How is your current financial education content delivery structured (standalone/embedded; online/in-person/hybrid)? What influenced this choice?
  - [Embedded course educator participants]: Did you choose to integrate financial education content, or is it normally part of this course? [If they choose to] Why do you think financial education fits well in this course?
- What techniques or tools have you found most successful in engaging students with financial education topics? Which did you try that were least successful?
- If you had limited time, what topic(s) do you believe are essential for financial literacy?

    - What tools, techniques, and activities would you use to ensure students leave with a solid understanding of those topics?
- [Embedded course educator participants] How does integrating financial topics into a broader curriculum affect the pacing and overall learning experience?

Student Outcomes

- What financial education concepts do students typically grasp most readily, and which ones require more support?
- How does student engagement in financial education compare to other subjects you teach?
- What feedback do you receive from students about the relevance and usefulness of the financial education content?
- How important is students' prior knowledge (in say math or general literacy) for understanding financial concepts? Have you observed any roadblocks to understanding financial concepts based on students' prior knowledge levels?

Educator

- How has your confidence and capability in teaching financial topics developed over time? What contributed to that change?
- How often do you engage with economic or financial education professional development?
- What professional development opportunities have been most valuable in supporting your financial education teaching?
- What role do your experiences with personal finance play in how you approach teaching these topics? Do you draw on your own life lessons? If so, which ones?

Curriculum

- What curriculum do you use to teach financial education? What do you like and dislike about this curriculum?
- Can you describe the most effective financial education curriculum you've used? What made it effective?
- [Embedded course educator participants]: What proportion of your course curriculum is devoted to financial education? Do you believe this amount was sufficient to achieve your teaching and learning goals?
- [Embedded course educator participants]: How do you navigate teaching financial concepts alongside your primary subject matter? What tradeoffs do you face?
- [Embedded course educator participants]: What activities or topics have worked best for integrating financial literacy?

Challenges, gaps, & recommendations:

- What aspects of teaching financial education do you find most rewarding? Most challenging?
- If you could design the ideal support system for financial educators, what would it include? (e.g., professional development, curriculum, administrative support)

- What gaps, if any, do you see in the existing financial education resources?

Closing

- Is there anything else you'd like to share about your experiences or perspectives on teaching financial education?

G. Student assessment instruments

Student knowledge assessment

Below is the complete 15-question multiple-choice knowledge assessment given to students with the corresponding Washington State Financial Education K-12 Learning Standard listed after each question. Correct answers are given in bold.

1. What is a budget? **8.SS.2 Discuss the components of a personal spending plan, including income, planned saving, and expenses.**
   a. A spending plan showing sources and uses of income
   b. A limit on spending that cannot be exceeded
   c. The amount of money that a credit card will let you charge without penalties
   d. I prefer not to answer

2. Which of the following would hurt your credit score? **11.CD.16 Identify factors that affect a particular credit scoring system.**
   a. Closing a long-held credit card account
   b. Paying off student loan debt
   c. Getting married
   d. I prefer not to answer

3. Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? **10.I.2 Calculate and compare the time value of money in the following situations: Given a rate of return and number of years, calculate the future value of a lump sum investment.**
   a. More than $102
   b. Exactly $102
   c. Less than $102
   d. I prefer not to answer

4. When deciding which of the two items to purchase, one should always: **8.SS.3 Compare saving strategies, including pay yourself first and comparison shopping.**
   a. Choose the item that costs less
   b. Choose the item with the greatest benefits

c. Choose an item after comparing the costs and benefits of both items

d. I prefer not to answer

5. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? **8.SS.15 Predict the effect of inflation on buying power.**

   a. More than today

   b. Exactly the same

   c. Less than today

   d. I prefer not to answer

6. Buying a single company's stock usually provides a safer return than a stock mutual fund **8.I.6 Compare investing in individual stocks and bonds with investing in mutual funds and exchange-traded funds.**

   a. True

   b. False

   c. I prefer not to answer

7. If interest rates rise, what will typically happen to bond prices? **8.I.6 Compare investing in individual stocks and bonds with investing in mutual funds and exchange-traded funds.**

   a. They will rise

   b. They will fall

   c. They will stay the same

   d. There is no relationship between bond price and the interest rate

   e. I prefer not to answer

8. A 15-year loan typically requires higher monthly payments than a 30-year loan, but the total interest paid over the life of the loan will be less.**7.CD.3 Compare the total cost of repaying a loan under various rates of interest and over different periods.**

   a. True

   b. False

   c. I prefer not to answer

9. Maya decided to get a 4-year degree in economics after graduating high school rather than enter the job market. What is the likely outcome of this decision for Maya's future income? **8.EI.3 Compare the costs of postsecondary education with the potential increase in income from a career of choice.**

   a. She will earn a higher income because she has more work skills to offer an employer.

   b. She will earn a higher income, but it will not cover the costs of the additional schooling.

   c. She will earn a higher income because employers are required to pay higher wages for additional degrees earned.

d. I prefer not to answer

10. Which of the following is the primary function of insurance? **8.RM.3 Illustrate how to use insurance to share the risk of financial loss.**
    a. Making risk disappear
    b. Pooling and sharing risk among the insured
    c. Making someone else pay for an accident or loss

11. Jordan paid for auto insurance every year but never had an accident or filed a claim. Did she get anything of value for the money she paid? **8.RM.1 Summarize how people manage the risk of financial loss through avoidance, acceptance, control and reduction, and transfer through insurance.**
    a. No, because the insurance company never had to pay a claim.
    b. No, because she protected herself and her car by being a careful driver.
    c. Yes, because the insurance company was paid to assume her accident risk.
    d. I prefer not to answer

12. Which of the following would be expected to hold its value best during a time of inflation? **8.I.1 Explain how rate of return, frequency of compounding, taxes, and inflation can affect changes in investment returns.**
    a. A certificate of deposit
    b. A corporate bond
    c. A house
    d. I prefer not to answer

13. Which of the following loans is most likely to be classified as "predatory"? **11.FD.6 Analyze expenses and risks of alternative financing or predatory lending options such as payday loans and credit card cash advances.**
    a. A high interest rate on a store credit card.
    b. A cash-back home loan with a higher interest rate taken out after a high-pressure sales pitch.
    c. A variable interest rate home mortgage that could rise 5 percentage points with inflation.
    d. I prefer not to answer

14. Which of the following strategies has shown the highest return over a period of years? **8.I.8 Analyze the potential benefits of a long-term investing strategy.**
    a. Moving frequently in and out of the stock market to avoid downturns and exploit upturns.
    b. Avoiding stocks entirely by keeping money in federally insured bank accounts.
    c. Buying and holding onto a varied set of stocks, ignoring short-run fluctuations.
    d. I prefer not to answer

15. Which of the following ordinarily provides the best value in automobile ownership? **10.SS.9 Research the costs and benefits of a new versus used car (e.g., maintenance, safety, financing, and gas mileage) versus alternative forms of transportation.**

    a. Always buying a new car and driving it for only a few years.

    b. Buying a relatively new used car and driving it for a long time.

    c. Buying the cheapest used car available.

    d. I prefer not to answer.

Student survey

Below is the complete survey given to students.

1. What grade are you currently in?
    - ○ 6th grade
    - ○ 7th grade
    - ○ 8th grade
    - ○ 9th grade
    - ○ 10th grade
    - ○ 11th grade
    - ○ 12th grade
    - ○ Other (Please write your answer)
    - ○ Prefer not to answer

2. What school do you go to? [Text box]

3. Who is your financial education teacher(s)? [Text box]

4. How often do you talk about financial education or money with friends and family? [Text box]

5. Including this class, how many financial education classes have you taken before?
    - ○ Just this one
    - ○ Two
    - ○ Three
    - ○ More than three
    - ○ Prefer not to answer

6. How was this class taught? (Select all that apply)
    - ○ In-person (at school)
    - ○ Online (on the computer)
    - ○ Hybrid (a mix of both in-person and online)
    - ○ Prefer not to answer

7. How much did you think about money before you took this class?
   - ○ A lot
   - ○ Some
   - ○ Not much
   - ○ Not at all
   - ○ Prefer not to answer

8. How interesting did you think the class was?
   - ○ Very interesting
   - ○ Somewhat interesting
   - ○ Not interesting
   - ○ Prefer not to answer

9. Why? [Text box]

10. How was the speed of the lessons?
    - ○ Too fast
    - ○ Just right
    - ○ Too slow
    - ○ Prefer not to answer

11. Which topics about money did you find most helpful? (Select all that apply)
    - ○ Budgeting (how to manage your money)
    - ○ Saving (how to save money for the future)
    - ○ Investing (how to make your money grow)
    - ○ Managing debt (how to deal with money you owe)
    - ○ Understanding credit (how to build and manage credit)
    - ○ Other (Please write your answer)
    - ○ Prefer not to answer

12. Were there any topics you wish were talked more about?
    - ○ Yes
    - ○ No
    - ○ Prefer not to answer

13. If yes, what topics? [Text box]

14. What activities helped you learn about money the most? (Select all that apply)
    - ○ Real-life examples
    - ○ Games

- ○ Group work
- ○ Watching videos
- ○ Lectures (the teacher talking)
- ○ Other (Please write your answer)
- ○ Prefer not to answer

15. What is one money topic you feel you understand well now? (Select one)
    - ○ Budgeting
    - ○ Saving
    - ○ Investing
    - ○ Managing debt
    - ○ Credit
    - ○ Other (Please write your answer)
    - ○ Prefer not to answer

16. Do you feel more confident making money decisions now?
    - ○ Yes, a lot more confident
    - ○ Yes, a little more confident
    - ○ No, not really
    - ○ No, not at all
    - ○ Prefer not to answer

17. How do you think what you learned in this class will affect your future money choices?
    - ○ It will help a lot
    - ○ It will help a little
    - ○ It won't really help
    - ○ It won't help at all
    - ○ Prefer not to answer

18. Can you think of an example where you might use what you learned? [Text box]

19. How confident are you in your math abilities?
    - ○ Very confident
    - ○ Somewhat confident
    - ○ Not really confident
    - ○ Not confident at all
    - ○ Prefer not to answer

20. Is there anything else you want to share about your experience with this class? As a reminder, your teacher will not see your response. [Text box]

H. Tables from student assessment analysis

Appendix Table 2: Regression Analysis of Student Knowledge Assessment Scores

	(1) Score	(2) Score	(3) Score	(4) Score
stand	.873*** (.169)	.747*** (.171)	-.094 (.239)	-.394 (.264)
teacherexp		-.001 (.013)	-.012 (.013)	-.042** (.021)
teacherexpfin		.035*** (.012)	.049*** (.012)	.079*** (.017)
contacthours			.009*** (.002)	.011*** (.002)
numscores				.006* (.004)
taughtonline				.79** (.329)
prevclass				.607*** (.187)
beforemoney				.721*** (.194)
learn_games				.28 (.257)
learn_life				-.277 (.254)
learn_group				-.213 (.253)
s_titleone				-.914*** (.259)
s_frl				-.02* (.012)
s_ell				.007 (.042)
s_native				.062 (.068)
s_min				-.025 (.021)
s_lowinc				.014 (.013)
s_locale				-.465* (.239)
s_fteratio				-.035 (.032)
s_spend				-.0003*** (.00006)
_cons	8.968*** (.136)	8.713*** (.211)	8.374*** (.213)	14.298*** (1.937)
Observations	1588	1588	1588	**1582**
R-squared	.017	.024	.043	.152

Robust standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1

Appendix Table 3: Regression Analysis of Student Interest in Financial Education Course

	(1) High interest	(2) High interest	(3) High interest	(4) High interest
stand	.205*** (.024)	..202*** (.025)	.116*** (.036)	.083** (.041)
teacherexp		.003* (.002)	.002 (.002)	.004 (.003)
teacherexpfin		-.003* (.002)	-.002 (.002)	.001 (.003)
contacthours			.001*** (0.001)	.001*** (0.001)
numscores				-.001 (.001)
taughtonline				-.043 (.046)
prevclass				.029 (.029)
beforemoney				.053* (.029)
learn_games				-.069* (.039)
learn_life				-.065* (.037)
learn_group				-.125*** (.038)
s_titleone				-.065 (.042)
s_frl				-.002 (.002)
s_ell				.013** (.006)
s_native				.012 (.011)
s_min				-.005 (.003)
s_lowinc				-.001 (.002)
s_locale				-.089** (.037)
s_fteratio				-.021*** (.005)
s_spend				-.00005*** (.000008)
_cons	.254*** (.018)	.227*** (.029)	.192*** (.03)	1.648*** (.28)
Observations	1588	1588	1588	1582
R-squared	.042	.045	.054	.093

Robust standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1

Appendix Table 4: Regression Analysis of Student Confidence in Money Decisions

	(1) Confident	(2) Confident	(3) Confident	(4) Confident
stand	.202*** (.022)	.197*** (.023)	.116*** (.033)	.107*** (.039)
teacherexp		.0002 (.002)	-.001 (.002)	-.002 (.003)
teacherexpfin		.001 (.002)	.002 (.002)	.004 (.002)
contacthours			.001*** (0.001)	.001*** (0.001)
numscores				0 (0)
taughtonline				-.041 (.044)
prevclass				.03 (.028)
beforemoney				.08*** (.027)
learn_games				-.088** (.038)
learn_life				-.053 (.034)
learn_group				-.11*** (.036)
s_titleone				.033 (.04)
s_frl				-.002 (.002)
s_ell				.008 (.006)
s_native				-.01 (.01)
s_min				-.004 (.003)
s_lowinc				.003 (.002)
s_locale				-.021 (.036)
s_fteratio				-.006 (.005)
s_spend				-.00001 (.000009)
_cons	.187*** (.016)	.176*** (.027)	.143*** (.029)	.563* (.293)
Observations	1588	1588	1588	1582
R-squared	.045	.045	.054	.073

Robust standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1