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Making the Case for the Need for Economic and Financial Literacy Education in the Classroom

In the pages that follow, we provide a summary of recent research that outlines the ongoing knowledge gap, demonstrates the effects of education on student knowledge and financial behavior, and discusses the implications for research and public policy initiatives geared toward improving economic and financial literacy education in the classroom. The research is numbered and organized chronologically with the most recent findings included first. To help with a topical search, we have also included a guide below.

Subject	**Corresponding Research**
The Problem of Economic and Financial Illiteracy	3, 4, 6, 7, 8, 10, 11, 13, 14, 15, 17
The Effect of Education on Student Knowledge	2, 4, 5, 10, 15, 16, 18, 19
The Effect of Education on Financial Behavior	1, 2, 7, 16, 20
Policy Recommendations	3, 4, 9, 12, 15, 16, 17, 18

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(1.) *The Effects of State-Mandated Financial Education on the Credit Behavior of Young Adults*
Carly Urban, Maximilian Schmeiser, J. Michael Collins, and Alexandra Brown, "State Financial Education Mandates: It's All in the Implementation," FINRA Investor Education Foundation, January 2015. https://files.ctctcdn.com/e5db0b81101/f5b36cd4-69bd-4f05-b539-cf73a91c2d73.pdf. The working paper version (Federal Reserve Board Working Paper 2014-68), which includes additional details regarding the authors' empirical methods and findings, can be found here: http://www.federalreserve.gov/pubs/feds/2014/201468/201468abs.html.
The authors looked at three states that implement a financial literacy mandate and compared credit scores and delinquency rates of young adults both before and after the mandate was instituted. They found that "young people who are in school after the implementation of a financial education requirement have higher credit scores and lower relative delinquency than those in control states." Further, the authors found that credit scores became higher as more years passed from initial implementation of the mandate, which "likely reflects teachers' ongoing learning and tailoring of the content and approach so as to be more effective for their students."

(2.) *The Effects of Financial Education on Elementary School Students' Knowledge, Behavior, and Attitudes*
Michael Batty, J. Michael Collins, and Elizabeth Odders-White, "Experimental Evidence on the Effects of Financial Education on Elementary School Students' Knowledge, Behavior, and Attitudes," *The Journal of Consumer Affairs* 2015, 49(1), 69-96. http://onlinelibrary.wiley.com/doi/10.1111/joca.12058/abstract.
This article evaluates the effects of a classroom financial education program based on CEE's *Financial Fitness for Life* that was randomly assigned to fourth- and fifth-grade classrooms. The program resulted in a large, statistically significant improvement in financial knowledge among the treatment group, and knowledge gains were retained a year later. Additionally, financial education had a positive impact on spending attitudes and behaviors like having a bank account and savings levels. According to the authors, "These results show that younger students can learn financial topics and that learning is associated with improved attitudes and behaviors which, if sustained, may result in increased financial capability later in life."

(3.) *An Assessment of College Students' Financial Behavior and Preparation*
"Money Matters on Campus: How College Students Behave Financially and Plan for the Future," Higher One and EverFi, 2015. http://moneymattersoncampus.org/.
Seeking to understand what factors most influence financial capability and how to best support the next generation of adults in achieving their financial goals, investigators surveyed 42,000 college students from across the country. The data suggest that "financial experience among incoming college students has increased, but that there has not been a concurrent increase in basic finance management skills or fiscal planning." Students report feeling less prepared to manage their money than any other challenge related to college life, and risky behaviors are still pervasive among college students. However, respondents who completed a high school course on personal finance management were 10% more likely to report being prepared to manage money. The report notes that significant progress has been made in the development and encouragement of financial literacy education but that more work needs to be done to promote financial literacy education at scale.

(4.) *A Review of Evidence Supporting the Importance of Financial Literacy*

Annamaria Lusardi and Olivia S. Mitchell, "The Economic Importance of Financial Literacy: Theory and Evidence," *Journal of Economic Literature* 2014, 52(1), 5-44. http://dx.doi.org/10.1257/jel.52.1.5.

This paper reviews empirical evidence that "low levels of financial knowledge are pervasive" both domestically and internationally, discusses research linking financial literacy with several economic behaviors, reviews the costs of financial ignorance, and assesses the effects of intervention programs, many of which work well at enhancing financial literacy. According to the authors, "there is reason to believe that mandating personal finance education may, in fact, be effective in increasing student knowledge…" Lusardi and Mitchell suggest that several key tasks remain to better understand and remedy the problem of financial illiteracy, concluding that "While the costs of raising financial literacy are likely to be substantial, so too are the costs of being liquidity-constrained, overindebted, and poor."

(5.) *The Positive Effects of a Well-Designed Personal Finance Course Taught by Properly Trained Teachers*

Carlos J. Asarta, Andrew T. Hill, and Bonnie T. Meszaros, "The Features and Effectiveness of the *Keys to Financial Success* Curriculum," *International Review of Economics Education* 2014, 16(A), 39-50. doi:10.1016/j.iree.2014.07.002

This article reviews the effects of a successful high school personal finance curriculum, *Keys to Financial Success*, which is offered by a consortium of partners in Delaware, Pennsylvania, and New Jersey, and is available to teachers from the Federal Reserve Bank of Philadelphia. After training teachers in the curriculum and implementing the one-semester *Keys* course, students exhibited a 61% average knowledge improvement. The curriculum was also most effective in improving the personal finance knowledge of students in the areas where the students needed the most help. As the authors note, their findings "lend support for the growing body of research that shows that a well-designed personal finance curriculum, properly implemented by trained teachers, can increase students' achievement in personal finance."

(6.) *The Financial Capability of Young Adults*

Gary R. Mottolla, "The Financial Capability of Young Adults—A Generational View," FINRA Investor Education Foundation, March 2014.
http://www.usfinancialcapability.org/downloads/FinancialCapabilityofYoungAdults.pdf

In an examination of data from the FINRA Investor Education Foundation's National Financial Capability Study, Mottola found that "millennials are struggling financially. In particular, they exhibit a number of problematic financial behaviors, display low levels of financial literacy and express concerns about their debt." Specific findings include that, among millennials:

- Only 24% can answer four or five questions correctly on a five-question financial literacy quiz
- 67% have no rainy day funds, 60% aren't saving for retirement, and 43% use costly non-bank borrowing methods
- 46% are concerned that they have too much debt, and 55% of those with student loans are concerned that they may not be able to pay off their debt

Millennials are under a fair amount of financial strain and may not be fully prepared for many of the financial challenges they face given their low level of financial literacy.

(7.) *High School Seniors' Financial Knowledge Affects Their Financial Responsibility*

"High School Seniors' Financial Knowledge and Outlook: A Discover Pathway to Financial Survey," Discover, 2013. http://www.pathwaytofinancialsuccess.org/wp-content/uploads/2014/04/Pathway-Financial-Knowledge-and-Outlook-Survey-Key-Findings.pdf.

According to this survey of 1,200 randomly-selected high school seniors, students ranked personal finance as the most important subject they needed to learn in school for their future success, but less than 1/3 have taken a personal finance course in school. The results of the survey substantiated students' assessment of the importance of personal finance education, showing that students who have taken a class in personal finance are more likely to engage in financially responsible behaviors such as saving, budgeting, and investing:

- 93% of those who have taken a class save money vs. 84% of those who have not
- 60% of those who have taken a class have a budget vs. 46% of those who have not
- 32% of those who have taken a class have invested money vs. 17 % of those who have not

(8.) *Exploring the Gap Between Learning and Knowledge in Financial Education*

"Bridging the Knowledge Gap Survey," Bank of America, September 2013. http://www.harrisinteractive.com/vault/091713_PACE_Schools%20for%20Tomorrow%20Panel%20%28local%29_FINAL.pdf.

Harris Interactive conducted a survey on behalf of Bank of America of 1,010 adults to explore the gap between learning and knowledge in financial education. The survey found that Americans overwhelmingly support including personal finance in the curriculum of high schools with 99% of adults surveyed saying that they believe it is important for high schools to teach students about personal finance. The survey also revealed some of the self-reported negative consequences of a lack of personal finance knowledge: 43% of U.S. adults believe they have missed good financial opportunities due to a lack of financial knowledge and 32% of U.S. adults believe they have made poor financial decisions as a result of their lack of knowledge.

(9.) *CFPB's Policy Recommendations for Advancing K-12 Financial Education*

"Transforming the Financial Lives of a Generation of Young Americans: Policy Recommendations for Advancing K-12 Financial Education," Consumer Financial Protection Bureau, April 2013. http://files.consumerfinance.gov/f/201304_cfpb_OFE-Policy-White-Paper-Final.pdf

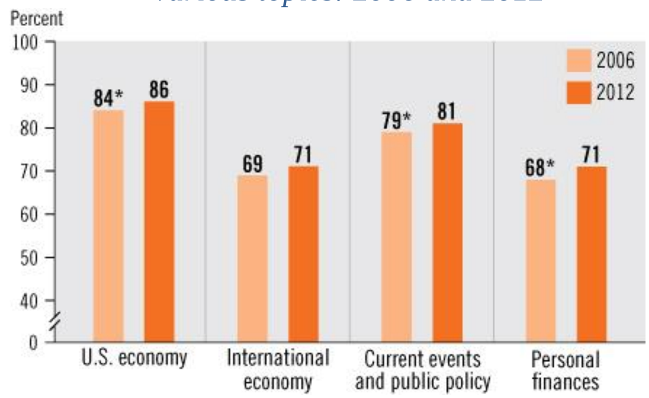
The Consumer Financial Protection Bureau proposes five essential strategies for advancing financial education for young Americans – (1.) Teach financial education early and consistently through the K-12 years; (2.) Introduce financial education concepts into standardized tests; (3.) Create innovative hands-on learning opportunities throughout the K-12 years to practice money management; (4.) Create consistent opportunities and incentives for teacher training in financial education; and (5.) Encourage parents to discuss money management topics at home.

(10.) *The Nation's Report Card on the State of 12th-Graders' Economic Literacy*

U.S. Department of Education, National Center for Education Statistics, *The Nation's Report Card: Economics 2012*, April 2013. http://nces.ed.gov/nationsreportcard/pubs/main2012/2013453.aspx.

According to the most recent National Assessment of Educational Progress (NAEP) economics assessment, the percentage of students performing at or above a *Basic* level has improved slightly since the last test was administered in 2006. However, still only 43% of students tested at or above *Proficient*, which is the level defined as representing competency over the subject matter. There are also significant achievement gaps based on race, gender, and family characteristics, with white students scoring higher than other racial/ethnic groups, male students scoring higher than their female peers, and students who reported higher levels of parental education scoring higher than those who reported lower levels. With regard to policy implications, student assessments substantiate empirical findings that economics-related courses help improve economics knowledge, with more than two-thirds of twelfth-graders agreeing that their coursework helped them understand various economics topics.

Percentage of students assessed in twelfth-grade NAEP economics who agreed that economics-related courses taken from ninth through twelfth grade helped them understand various topics: 2006 and 2012



* Significantly different ($p < .05$) from 2012.
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2006 and 2012 Economics Assessments.

(11.) *A Survey of Girls' Financial Literacy*

"Having It All: Girls and Financial Literacy," A Report from the Girl Scout Research Institute, April 2013. http://www.girlscouts.org/research/pdf/GSRI_having_it_all_report.pdf. The Girl Scout Research Institute conducted a nationwide survey with over 1,000 girls ages 8−17 and their parents to better understand girls' level of financial literacy and their confidence about, attitudes towards, and experiences with money. According to the survey, girls need and want financial literacy skills to help them achieve their dreams, with 90% saying it is important for them to learn how to manage money. However, just 12% of girls surveyed feel "very confident" making financial decisions.

(12.) *President's Advisory Council on Financial Capability's Recommendations for Improving Americans' Financial Understanding*

President's Advisory Council on Financial Capability, "Final Report," January 29, 2013. http://www.treasury.gov/resource-center/financial-education/Documents/PACFC%20final%20report%20revised%2022513%20%288%29_R.pdf.

In its final report, the President's Advisory Council on Financial Capability suggested four major recommendations for improving Americans' understanding of financial matters: (1.) that the federal government should encourage and support the introduction of financial literacy into homes and communities using accessible tools and into schools by integrating critical personal finance competencies into the teaching of the Common Core State Standards for English and math; (2.) that the federal government encourage employers to improve the financial capability of their employees and support that effort by promoting and disseminating "Financial Capability at Work," a resource guide for employers; (3.) that the President and the Secretary of the Treasury encourage the creation of councils at the state, local and tribal level to help improve the financial capability of citizens; and (4.) that the federal government should establish an online clearinghouse for research in the field of financial education and behavioral economics that is informed by rigorous research standards.

(13.) *Students' Financial Literacy in a Global Context: The Results of PISA's First Financial Literacy Assessment*

"United States – Country Note – Results from PISA 2012 Financial Literacy," Program for International Student Assessment (PISA). http://www.oecd.org/unitedstates/PISA-2012-results-finlit-usa.pdf.

According to PISA's first financial literacy assessment, American teenagers fall in the middle of the pack globally, performing around the average of the 18 countries that participated – just behind Latvia and just ahead of Russia. More than one in six students surveyed in the United States lack the financial knowledge and skills needed for the demands of today's world, failing to meet the baseline level of proficiency.

(14.) *An Assessment of Americans' Financial Capability*

"National Financial Capability Study," FINRA Investor Education Foundation, 2012. http://www.usfinancialcapability.org/.

FINRA's most recent National Financial Capability Study shows that Americans continue to exhibit low levels of financial literacy. A majority of American adults (61%) are unable to answer more than three of five fundamental financial literacy questions correctly – compared to 58% in 2009.

(15.) *The State of Financial Illiteracy among the Young*

Annamaria Lusardi, Olivia S. Mitchell, and Vilsa Curto, "Financial Literacy among the Young," *The Journal of Consumer Affairs* 2010, 44(2), 358-380. http://www.councilforeconed.org/wp/wp-content/uploads/2011/11/Financial-Literacy-for-Young-Lusardi.pdf.

In their examination of financial literacy among the young, Lusardi, Mitchell, and Curto found that financial literacy was "severely lacking among young adults" with only 27% knowledgeable about inflation and risk diversification and able to do simple interest rate calculations. However, there were significant differences according to sociodemographic, family, and peer characteristics. For example, according to their analysis of respondents' responses to three financial literacy questions, women were less likely to respond correctly to each of the three questions than men; whites were more likely than black and Hispanic respondents to answer all three questions correctly; and those whose mothers had some college education had higher correct response rates than those whose mothers graduated from high school. Considering the policy implications of their research, the authors conclude that "Several findings in this paper support financial education in high school."

(16.) *Students from States with Required Finance Courses Exhibit Positive Financial Behaviors*

Michael S. Gutter, Zeynep Copur, Selena Garrison, "Financial Capabilities of College Students from States with Varying Financial Education Policies," National Endowment for Financial Education, December 2009. http://www.nefe.org/what-we-provide/primary-research/financial-education-mandates-report.aspx.

Dr. Michael Gutter of the University of Florida surveyed 15,797 students at 15 geographically diverse college campuses across the United States to assess their financial knowledge, financial dispositions, and financial behaviors. Gutter found that students from states where a financial education course was required had the highest reported financial knowledge and were more likely to display positive financial behaviors and dispositions. Compared to other students, these young adults were:

- More likely to save
- Less likely to max out their credit cards
- Less likely to make late credit card payments
- More likely to pay off credit cards in full each month
- Less likely to be compulsive buyers
- More likely to be willing to take average financial risk

Given these findings, the authors conclude that states without standards should consider adopting standards as a minimum. Because requiring a course was the only policy to be positively related to the likelihood of students engaging in positive financial practices, they suggest that the ideal situation is for states to adopt standards that require courses and assessment.

(17.) *The Need for a Greater Focus on Teacher Training*

Wendy L. Way and Karen Holden, "Teachers' Background and Capacity to Teach Personal Finance: Results of a National Study," National Endowment for Financial Education, March 2009. http://www.nefe.org/what-we-provide/primary-research/grant-studies-teachers-preparedness-and-money-man.aspx.

In a two-year national study, researchers set out to discover more about the needs and characteristics of the teachers who are called upon to deliver personal finance education in the classroom. The study found that teachers recognize the need for financial education, but that few teachers currently are teaching financial literacy and teachers do not feel prepared to teach personal finance. Key findings include:

- 89 percent of teachers agree or strongly agree that students should take a financial literacy course or pass a test for high school graduation
- Only 29.7 percent of teachers are teaching financial education in any way— in existing classes or special classes on finance topics
- 63.8 percent of teachers feel unqualified to utilize their state's financial literacy standards
- Only 37 percent of K–12 teachers had taken a college course in personal finance
- Only 11.6 percent of K–12 teachers had taken a workshop on teaching personal finance
- Less than 20 percent of teachers reported feeling very competent to teach any of the six personal finance topics surveyed

The authors conclude that there is a great need to expand personal finance educational opportunities for teachers.

(18.) *A Review of Research in Economic Education and the Results of a National Survey of High School Economics Teachers*

J.R. Clark, Mark C. Schug, and Ashley S. Harrison, "Recent Trends and New Evidence in Economics and Finance Education," *Journal of Economics and Finance Education* 2009, 8(2), 1-10. http://www.economics-finance.org/jefe/econ/ClarkSchugHarrisonpaper.pdf.

This paper reviews research in economic education and highlights the results of a national survey of social studies and economics teachers. When asked why economics should be included in the school curriculum, 87% of economics teachers emphasized that economics enables students to better understand important current economic affairs, and 80% of economics teachers agreed that economics helps students become well adjusted, productive members of society. Overall, the authors conclude that young people can learn economics and learn best when they are taught by knowledgeable teachers using well-developed curriculum materials. They suggest that in order to accommodate more state requirements, state bureaucracies should increase teacher training and curriculum standards.

(19.) *What Works: A Review of Research on Outcomes and Effective Program Delivery in Precollege Economic Education*

Michael Watts, "What Works: A Review of Research on Outcomes and Effective Program Delivery in Precollege Economic Education," The United States Department of Education Office of Innovation and Improvement and the Council for Economic Education, 2005. http://www.councilforeconed.org/wp/wp-content/uploads/2011/11/What-Works-Michael-Watts.pdf.

In this extensive review of specialized studies in the field of economic education, Watts finds that most research is "broadly supportive of precollege education, in suggesting that even young students can understand basic concepts that may help people make better decisions as consumers, workers, and citizens." Further, "A separate secondary course in economics seems likely to be the single most important way to increase students' level of economic understanding." According to Watts' review of the available literature, students can and do learn economics when their teachers understand the content, are trained in teaching economics, and use high-quality educational materials in the classroom.

(20.) *The Long-Term Effects of High School Financial Curriculum Mandates on Adult Financial Decision-Making*

B. Douglas Bernheim, Daniel M. Garrett, and Dean M. Maki, "Education and Saving: The Long-Term Effects of High School Financial Curriculum Mandates," *Journal of Public Economics* 2001, 80(3), 435-465. doi:10.1016/S0047-2727(00)00120-1.

The authors set out to determine whether state mandates for high school instruction on topics related to household financial decision-making have had any effect on adult financial decision-making. They found that individuals who had state-mandated financial education in high school had higher reported rates of savings and higher net worth in adulthood.