

Financial Literacy Environmental Scan

October 2016

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Texas Higher Education Coordinating Board



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The mission of the Texas Higher Education Coordinating Board is to provide leadership and coordination for the Texas higher education system and to promote access, affordability, quality, success, and cost efficiency through *60x30TX*, resulting in a globally competitive workforce that positions Texas as an international leader.

Agency Vision

The THECB will be recognized as an international leader in developing and implementing innovative higher education policy to accomplish our mission.

Agency Philosophy

The THECB will promote access to and success in quality higher education across the state with the conviction that access and success without quality is mediocrity and that quality without access and success is unacceptable.

The Coordinating Board's core values are:

Accountability: We hold ourselves responsible for our actions and welcome every opportunity to educate stakeholders about our policies, decisions, and aspirations.

Efficiency: We accomplish our work using resources in the most effective manner.

Collaboration: We develop partnerships that result in student success and a highly qualified, globally competent workforce.

Excellence: We strive for excellence in all our endeavors.

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Introduction

This report is an environmental scan of financial literacy, an objective review of the current and anticipated environmental factors related to the ability to learn and apply skills to manage financial resources. This scan was conducted in preparation for the newly formed Financial Literacy Advisory Committee's (FLAC) inaugural meeting. The FLAC was formed as part of addressing the student debt goal in *60x30TX*, the Texas strategic plan for higher education (THECB, 2015). The goal reads, "By 2030, undergraduate student loan debt will not exceed 60 percent of first-year wages for graduates of Texas public institutions" (p. 26). The student debt goal was designed to help students who graduate with student loan debt to complete credentials with manageable student debt, as well as "to increase access and persistence, expand students' options for careers after graduation, and advance other life choices" (p. 29). One strategy under the student debt goal is to "build the financial literacy of Texans to promote a better understanding of how and why to pay for higher education" (p. 30). Creating a statewide advisory group to investigate financial literacy is cited as an example of how to implement this strategy.

The focus on financial literacy is poignant, especially for college students and adults who are Millennials (born 1981-1997) or in Generation Z (born 1998-TBD). The target population for the *60x30TX* goal, ages 25-34, will be split between Millennials and Generation Z in 2030. Both of these groups' early financial experiences were shaped by the Great Recession that began in 2008.¹ Many older Millennials were early in their careers or just entering the workforce at that time. All Millennials and older members of Generation Z witnessed and experienced their families coping with the recession. Both generations value higher education, and both generations are likely to need student loans to pay for higher education (Combs, 2014). Bolstering their financial literacy is critical for achieving the student debt goal. "Econometric models and experiments have done much to confirm the causal impact of financial literacy on economic decision making" (Lusardi & Mitchell, 2014). Indeed, bolstering the financial literacy of all Texans is critical not only to the student debt goal, but also to Texans' financial well-being, and to the economic health of our state.

"Econometric models and experiments have done much to confirm the causal impact of financial literacy on economic decision making" (Lusardi & Mitchell, 2014).

College student borrowing has become one of the more prominent education policy issues in the United States, due in part to the staggering increases in student indebtedness and the rates of costly student loan default and delinquency (Federal Reserve Bank of New York, 2016). However, it is not the only concern of policymakers, practitioners, educators, and advocates when it comes to the financial capability and well-being of young adults. In addition to reporting higher levels of student debt, college students are accruing high levels of "credit card debt, displaying poor understanding of financial topics, responding variably to fiscal interventions, and becoming less proactive and responsible in their goals and plans for the future" (EverFi, 2016, p. 6). College students are not the only group to display low levels of financial literacy. In fact, in the most recent National Financial Capability Study (NFCs), which

¹ Although fewer Millennials will be in the 25-34 age range in 2030, the number of adult students who return for postsecondary credentials is expected to exceed the number of traditional students who seek postsecondary credentials directly from high school in the not-too-distant future.

collects data on responses to five questions that measure understanding of interest rates, inflation, bond prices, mortgage, and risk and diversification, the overall financial literacy demonstrated by respondents across the United States indicated a slight downtrend since data were first collected, decreasing from 42 percent in 2009, to 39 percent in 2012, and to 37 percent in 2015 (FINRA, 2016). This is a particular concern in Texas because Texas was one of seven states to average fewer than three correct answers out of five questions.

As with other states, Texas has turned its attention toward the critical issues associated with financial literacy and student debt, and the potential impact they can exert on the financial well-being of its citizens. This report will explore: 1) what is known about the development of financial literacy and financial capability and why it is important, 2) existing approaches to financial education programs (including counseling and coaching), 3) to what extent research literature is informing these approaches, and 4) an overview of promising financial decision-making tools, strategies, and resources.

What is the Difference between Financial Literacy and Financial Capability and Why are They Important?

Financial Literacy

Financial literacy as a construct was first identified by the Jump\$tart Coalition for Personal Financial Literacy in its inaugural 1997 study, “Jump\$tart Survey of Financial Literacy among High School Students” (Hastings, Madrian, & Skimmyhorn, 2013). Since 2000, the survey has been repeated biennially and expanded to include college students in 2008.² As delineated in the 2015 edition of the National Standards in K-12 Personal Finance Education, published by the Jump\$tart Coalition, financial literacy refers to “the ability to use knowledge and skills to manage one’s financial resources effectively for a lifetime financial security” (p. 1).

Financial literacy is “the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being” (Dept. of the Treasury, 2008, p. 4).

This definition is similar to the one adopted by the President’s Advisory Council on Financial Literacy (PACFL), which was established in 2008 when President George W. Bush signed Executive Order 13455: “the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being” (Dept. of the Treasury, 2008, p. 4).

Little did the PACFL know that while tasked with making recommendations to address the issue of financial literacy, the nation would plunge into an unprecedented financial and credit crisis that would quickly engulf the entire American economic system. “While the crisis has many causes, it is undeniable that financial illiteracy is one of the root causes” (Dept. of the Treasury, 2008, p. 1). The resulting impact of that economic crisis “highlighted how essential it is that individuals and families have the information, education, and tools that they need to make good financial decisions in an increasingly complex U.S. and global financial system” (FLEC, 2011, p. 2).

² See Mandell 2009 for an analysis of these surveys.

In highlighting the need for increased financial literacy, policymakers recognized the importance of being able to measure the construct. In 2008, Lusardi and Mitchell designed the following “Big Three” financial literacy questions, which often are used nationally and internationally as benchmarks in assessing the following concepts associated with financial literacy: 1) numeracy and capacity to do calculations related to interest rates, such as compound interest; 2) understanding of inflation; and 3) understanding of risk diversification. Lusardi and Mitchell’s “Big Three” questions are:

1. Suppose you had \$100 in a savings account and the interest rate was 2 percent per year. After 5 years, how much do you think you would have in the account if you left the money to grow? (Possible answers: more than \$102, exactly \$102, less than \$102, do not know, refuse to answer).
2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy? (Possible answers: more than today, exactly the same, or less than today, do not know, refuse to answer).
3. Do you think that the following statement is true or false? “Buying a single company stock usually provides a safer return than a stock mutual fund.” (Possible answers: true, false, do not know, refuse to answer) (2014, p. 5).

Two additional questions were added to Lusardi and Mitchell’s “Big Three” in the 2009 National Financial Capability Study (NFCS)³, a large national survey of the financial capabilities of the adult population in America. These included:

4. A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage but the total interest over the life of the loan would be less (true, false, do not know, refuse to answer).
5. If interest rates rise, what will typically happen to bond prices? (they will rise, they will fall, they will stay the same, there is no relationship, do not know, refuse to answer).⁴

In an attempt to further define financial literacy, and to respond to a void of national financial literacy standards, organizations such as the Department of the Treasury, the Institute for Financial Literacy (IFL), the President’s Council on Financial Capability, the Programme for International Student Assessment (PISA), Jump\$tart Coalition for Personal Financial Literacy, and the Council for Economic Education (CEE) produced versions of their standards to assist in the development and measurement of financial literacy programs. Most recently, the Council for Economic Education (2013) released its version, identifying the following six standards: earning income, buying goods and services, saving, using credit, financial investing, and protecting and insuring.

³ The NFCS has three components, a national random-digit-dialed telephone survey, a state-by-state on-line survey, and a survey of U.S. military personnel and their spouses.

⁴ Link to NFCS 2016 Financial Literacy Quiz: <http://www.usfinancialcapability.org/quiz.php>

Furthermore, in 2010, as part of the Dodd-Frank Wall Street Reform and Consumer Project Act, the Consumer Financial Protection Bureau (CFPB) was created with the mandate to establish an “Office of Financial Education, which shall develop a strategy to improve the financial literacy of consumers.” Upon studying “effective methods, tools, and strategies intended to educate and empower consumers about personal financial management,” the comptroller will make recommendations for the “development of programs that effectively improve financial education outcomes.”⁵ These efforts have highlighted the importance of developing and measuring financial literacy within America.

Financial Capability

In response to the de-leveraging of the economy, the Financial Literacy and Education Commission (FLEC), an organization established under the Fair and Accurate Credit Transactions Act of 2003, was tasked with crafting a new national strategy for financial literacy, which was released in 2011 (FLEC, 2011). Four goals and related objectives were established, shifting the conversation from literacy to financial capability and core competencies, promoting rigorous research and evaluation on financial literacy and education, and encouraging sharing of resources and programs. Unlike financial literacy, financial capability cannot be measured simply by looking at one indicator, such as demonstrated knowledge of specific terms or concepts. Instead, “financial capability is a multi-dimensional concept that encompasses a combination of knowledge, resources, access, and habits” (FINRA, 2015, p. 2).

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The results from the 2015 National Financial Capability Study (NFCS) provide evidence that the financial circumstances of Americans have improved over the last several years, with Americans experiencing less financial stress and improved financial satisfaction in comparison to the 2012 and 2009 studies. However, that improvement has not affected all Americans equally. “Consistent with the 2009 and 2012 studies, the 2015 NFCS results demonstrate “that measures of financial capability continue to be much lower among younger Americans, those with household incomes below \$25,000 per year, and those with no postsecondary educational experience. African Americans and Hispanics, who are disproportionately represented among these demographic segments, also show signs of lower financial capability, making them more vulnerable” (FINRA, 2016, p. 3). Student debt continues to be a growing concern, with many loan holders indicating they did not fully understand what they were getting into when they took out their loans; 54 percent did not calculate their monthly payments when obtaining their loans; and about half (48%) are concerned that they will not be able to pay them off. More than half (53%) said, that given the chance to do it all over again, they would choose a different course of action when it came to making the same choices about student loans. Among respondents with student loans, 28 percent indicated they did not complete the educational program for which they secured the loan (FINRA, 2016, p. 23).

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⁵ See Dodd-Frank Wall Street Reform and Consumer Protection Act. H.R. 4173. Title X – Bureau of Consumer Financial Protection 2010, Section 1013. <https://www.gpo.gov/fdsys/pkg/BILLS-111hr4173enr/pdf/BILLS-111hr4173enr.pdf>, accessed October 12, 2016.

Moreover, according to the Federal Reserve Bank of New York, total household debt in dollars has been on the rise over the past few years, after falling steadily from 2003-2013, with student loans and auto loans contributing to a lot of the increase (FINRA, 2016). "Younger respondents and those with lower incomes are more likely to feel burdened by debt" (p. 26). In contrast to the improvements in the multiple measures of financial capability, as measured by the NFCS (making ends meet, planning ahead, managing financial products, and financial knowledge and decision-making), those same data showed a downward trend in financial literacy since 2009.

At the college level, increasing levels of financial capability is important. Students are faced with rising tuition costs and increasingly complex financial decisions, many of which are new to them given their immersion in an environment without direct parental support and supervision. A lack of financial capability and difficulty in making sound financial decisions can lead to financial-related stress, which has become increasingly more common among students (Phinney & Haas, 2003); to poor academic performance and productivity (Pinto, Parente, & Palmer, 2001); and/or leaving college to work additional hours to manage debts (Roberts & Jones, 2001). "Each of these outcomes adversely affects retention rates at colleges and universities and hinders students' career potential" (Goetz, Cude, Nielsen, Chatterjee, & Mimura, 2011, p. 27). "By delivering value-added financial literacy programs and services, college leaders can help students understand how to finance college and encourage prudent financial habits" (Harnisch, 2010, p. 2).

How Do Individuals Acquire Financial Literacy and Develop Financial Capability?

Hastings et al. (2013) explain that although financial literacy and capability are fairly new constructs, financial education as "an antidote to poor financial [decision-making] is not" (p. 3). In the United States, policy initiatives to address the quality of personal financial decision-making through financial education can be traced back to the 1950s and 1960s, when states began mandating the inclusion of personal finance, economics and other consumer education topics in K-12 curriculum. Private financial and economic education initiatives have a much longer history and continue to contribute in various capacities, such as the Junior Achievement organization and the Council for Economic Education (CEE), and more recently, Warren Buffet's Learn & Earn educational program - the "Secret Millionaire's Club" - and the Khan Academy.

Financial education is defined as, "the process by which people improve their understanding of financial products, services, concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being" (Dept. of the Treasury, 2008, p. 4). Historically, American state colleges and universities have had an undefined role in financial education (Harnisch, 2010). For the most part, it has been delivered at the middle and high school levels. According to the Council for Economic Education's (CEE) 2016 Survey of the States report, there are only 17 states in the United States that mandate a personal finance course as part of high school graduation and only seven of these require standardized testing to gauge understanding of these concepts, including Colorado, Georgia, Michigan, Missouri, Oregon, Texas, and Utah (EverFi, 2016).

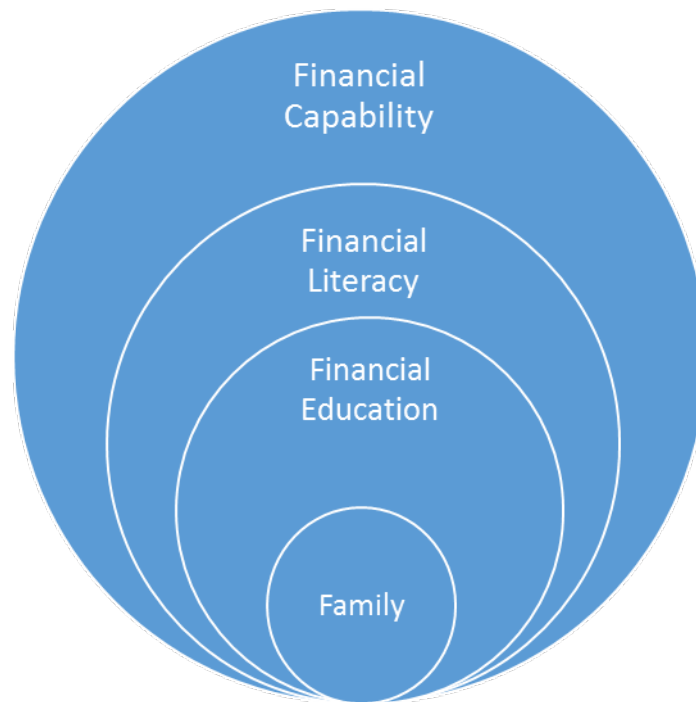


Figure 1: Potential influences on development of financial capability

In reflecting on how financial literacy and capability may be developed, the literature points to differences in family backgrounds. In controlling for a set of demographic and economic characteristics, Lusardi, Mitchell, and Curto (2010) linked the financial literacy of respondents ages 23-28 in the National Longitudinal Survey of Youth (NLSY) to characteristics of the households in which they grew up. Respondents' financial literacy was correlated significantly and positively with parental education and whether their parents held stocks or retirement accounts when the respondents were teenagers. Mahdavi and Horton (2014) also reported a connection between financial literacy and parental education. "In other words, financial literacy may well get its start in the family, perhaps when children observe their parents' saving and investing habits, or more directly by receiving financial education from parents (Chiteji, & Stafford, 1999; Li, 2009; Shim, Xiao, Barber, & Lyons, 2009)" (as cited in Lusardi et al., 2010, p. 10). Lusardi et al. (2010) highlight other studies that report financial capability varies by income and employment type, with lower-paid individuals not doing as well; by race and ethnicity, with African Americans and Hispanics displaying the lowest level of financial knowledge; and by nationality gap, with foreign citizens reporting lower financial literacy.

Consistent with the belief that financial capability matters for the economic well-being of individuals, a growing literature has established a correlation between financial literacy and various financial behaviors and outcomes. Higher levels of financial literacy, for instance, are linked to behaviors such as paying bills on time, tracking expenses, budgeting, paying credit card bills in full each month, saving, building an emergency fund, diversifying investments, planning for retirement and wealth accumulation (Ameriks, Caplin, & Leahy, 2002; Hilgert, Hogarth, & Beverly, 2003). Conversely, low levels of financial literacy are associated with negative credit behaviors, such as debt accumulation, high-cost borrowing, poor mortgage

choice, and mortgage delinquency, and home foreclosure (Moore, 2003; Lusardi & Tofano, 2009; Gerardi, Goette, & Meier, 2010).

Not surprisingly, interest in research and policy on financial literacy is vibrant and ongoing at the state, national, and international levels, as policymakers, educators, practitioners, and researchers continue to recognize the critical importance financial literacy plays in ensuring the financial health,

well-being, and economic stability of individuals, families, local communities, and regional markets. “While the base of evidence regarding approaches aimed at improving financial [decision-making] outcomes (i.e. financial capability strategies) is growing, there remains too little rigorous empirical support. The implication of this is that service providers, financial institutions,

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policy makers, and funders have not been able to draw solid conclusions about which strategies are most effective” (CFPB, 2014, p. 3). The good news is that since the distribution of the CFPB report in 2014, there have been multiple efforts to fill the gap by researchers to conduct more rigorous, evidence-based studies, such as randomized-controlled-trials (RCTs) in the areas of financial education, financial counseling, and more recently, financial coaching.

Given the promise that randomized controlled trials (RCTs) hold to produce the highest standard of quantitative evidence about the effectiveness of an intervention, the CFPB partnered with the Urban Institute to “engage in rigorous quantitative evaluation of promising financial education strategies” and produce a report highlighting how to conduct rigorous, evidence-based research studies (CFPB, 2014, p. 4).

Financial Education, Counseling, and Coaching: Research and Evidence

Financial Education

Although there is consensus on the importance of financial education as an influencing factor on the acquisition of financial knowledge, the research is mixed regarding state-mandated financial education in high school and how effective it is on financial literacy. In 2001, a study by Bernheim, Garrett, and Maki (2001) used survey data to determine a link between receiving state-mandated financial education at the high school level and savings rates later in life. This study, however, was later contradicted when Cole and Shastry (2010) used an analysis of census data to demonstrate that states, which had high savings and investment rates due to economic growth were more likely to mandate financial education curriculum in high school. Roll and Moulton (2016) supported this finding and also found that economic growth encouraged savings later in life. In other words, economic growth was the causal agent for both mandating financial education curriculum and improved savings later in life.

The main criticism of research studies exploring the effects of financial education is that few studies have used elements of experimental design, making it difficult to disaggregate the program effects from selection bias (Hung, Mihaly, & Yoong, 2009). Two meta-analyses of

financial education interventions were reported in 2014: one that explored 188 studies and “found 140 that demonstrated positive relationships between financial education and outcomes in the areas of savings, credit performance, and promoting areas like credit default” (Miller, Reichelstein, Salas, & Zia, 2014); and another one that “found negligible effects of interventions on behavior . . .” (Fernandes, Lynch, & Netemeyer, 2014) (as cited in Theodos et al., 2015).

One issue that may be influencing the impact of financial education on behavior is the lack of consideration given to the length of time in which knowledge is acquired and applied. As Wagner and Walstad (2016) demonstrate, although financial education appears relatively ineffective or shows mixed results in changing short-term financial behaviors of people, it can have an important and positive influence in changing the long-term financial behavior of people. Using survey data from the 2012 NFCS, Wagner and Walstad (2016) explored the differential effect of financial education on short-term and long-term financial behaviors based on different forms—in high school, in college, and continuing into employment or in the military.

They categorized the financial literacy questions as short-term (basic money and credit management skills) or long-term (savings and investment skills). “As suggested by thinking about the time factor, the results show that financial education is more important and has larger effects on the likelihood of engaging in the long-term financial behaviors than short-term behaviors” (Wagner & Walstad, 2016, p. 18). In reviewing the possible combinations of financial education, the researchers concluded that those that included an employer course were the most significantly related to long-term behaviors. Furthermore, the marginal effects are larger for multiple courses compared to single courses—“taking more than one course reinforces the complex long-term behaviors” (p. 19). Wagner and Walstad (2016) state further that,

“The results show that financial education is more important and has larger effects on the likelihood of engaging in the long-term financial behaviors than short-term behaviors” (Wagner & Walstad, 2016, p. 18).

Financial education from different sources throughout life appears to have significant positive effects on long-term financial behaviors, indicating that financial education can be a valuable contributor in shaping thinking that affects what people do to create a better financial future for themselves. (pp. 2-3)

Although not a rigorous study in terms of methodology, the results suggest correlation between financial education and positive long-term effects.

State-mandated programs. In targeting the effects on short-term financial behavior, Urban, Schmeiser, Collins and Brown (2015) selected three states that had changed financial education mandates after the year 2000, and that previously had not mandated financial education in high schools: Georgia, Idaho, and Texas,⁶ with mandates of somewhat varying degrees. Each of these states had well-documented interventions that are considered relatively rigorous by the Council for Economic Education and that shared the following common features: 1) “They all have some form of standardized personal finance curriculum; and each state integrated the personal finance instruction into a required economics course for high school

⁶ See Section 28.0021 of Texas Education Code:
<http://www.statutes.legis.state.tx.us/Docs/ED/htm/ED.28.htm#28.001>

students” ; and 2) “In addition to the graduation requirement, Georgia and Texas require testing in personal finance and Georgia requires teacher training prior to implementing the course” (pp. 2, 9).

To determine the true effect of state-mandated personal finance education, the researchers accessed the Federal Reserve Bank of New York/Equifax Consumer Credit Panel (CCP) data and examined the credit behavior of young adults starting at age 18 until they reached age 22. Researchers determined this by using,

a difference-in-difference approach that compares the change in credit outcomes for cohorts of young adults pre- and post-implementation of the financial education mandate in the treated states to the change in credit outcomes for cohorts of young adults in an adjacent control state where no state-mandated financial education was implemented. (p. 2)

Results of this study indicated notable improvements in credit outcomes for young adults who take personal finance courses in high school, with overall rises in average credit scores and lowered delinquency rates. Similarly, as pointed out in the Wagner and Walstad (2016) study regarding the dimension of time, while the overall effects of the education may have been minimal and sometimes negative during the first year of post implementation, by the second year, there were consistently positive results leading the researchers to conclude that “if implemented properly, mandatory personal financial education in high school could improve the credit behavior of young adults” (Urban et al., 2015, p. 9).

Recent research by Brown, Grigsby, van der Klaauw, Wen, and Zafar (2016) has expanded on Urban et al.’s investigation of the effects of state-mandated financial education on the financial literacy of young adults with an in-depth investigation of the impact of statewide-mandated mathematics, economics, and financial reforms on students’ debt outcomes in the decade immediately following high school. Controlling for “the possibility that states that implement financial education reforms may have preexisting trends that differ from those that do not, and that trends in the outcomes across different birth cohorts may differ” (p. 2492), results of the empirical analysis of large-scale changes in financial education reforms, affecting large populations of high school students across the United States, revealed that “exposure to financial and quantitative education has significant, if moderate, impacts on the debt-related outcomes of 19-29 year olds” (p. 2492). Additional mathematics training leads to “improved creditworthiness . . . and decreases adverse outcomes, such as accounts in collection” and “leads to significant positive impacts on the propensity to hold student debt and on student debt balances”⁷ (p. 2492).

Moreover, financial literacy programs increase the prevalence of credit reports in this age group; suggest improved understanding of the value of credit history; lead to a modest, but highly significant, decrease in the likelihood of having any outstanding debt for this large population (a decrease of 0.6 percentage points); and results in a small decline in delinquency (Brown et al., 2016). Although the researchers acknowledge that the results of the study

⁷Prior to 2012-2013, high school students were required to take four Math credits to graduate. Over time, Math credits required for graduation were reduced to three.

2014-2015 Texas Math Graduation Requirements (3 Math credits)
(<http://www.tea.state.tx.us/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25769809836&libID=25769809849>)

provide little evidence of the mechanisms through which math, economics, and financial literacy requirements impact young borrowers,

given the substantial and varied estimated effects of these three categories of quantitative training on early debt outcomes, research that refines our understanding of the relationship between training content and youth outcomes would be valuable to the design of policy. (p. 2519)

In acknowledging the recent work of Urban et al. (2015) and Brown et al. (2016) on the potential impact of state-mandated financial education requirements on credit scores and reduction of default rates, Collins, Stoddard, and Urban (2016) extend this body of research “by estimating the causal effect of financial education on several components of financial aid packages aimed to finance higher education” through an analysis that draws “on cross-state comparisons, as well as administrative data that compares school districts within a state” (p. 2). Given that Brown et al.’s (2016) study did not account for individual-level characteristics or other components of financial aid packages (i.e., non-loan aid), Collins et al. (2016) seek to contribute to the literature by determining “the effects of financial education on the full picture of financial aid packages” (p. 2).

The authors used several data sources to inform their research: the Common Data Set, the Integrated Postsecondary Education Data System (IPEDS), the U.S. Department of Education Pell Grant Files, the Fiscal Operations Report and Application to Participate (compiled by College In Sight), FAFSA data, and a unique administrative dataset from the Montana University System. Preliminary research suggests that students from high schools offering personal finance were more likely to obtain scholarships and receive large scholarship amounts, relative to students from the same school prior to the personal finance course offering and students from high schools not offering personal finance.

Financial Counseling

In its 2014 report, *Financial Literacy in Higher Education: The Most Successful Models and Methods for Gaining Traction*, the Coalition of Higher Education Assistance Organizations (COHEAO) highlighted individual counseling programs, in addition to interactive online, classroom-based, game-based, and event-based programs, as the most prevalent and successful models in higher education. Theodos et al. (2015) define counseling as “interventions linked to particular goals or responding to particular crisis or personal issues” that are “generally one-on-one interventions, limited in duration, designed to solve a client’s particular financial problem—often crisis focused, and involving some set of explicit directives to the client to meet that end” (p. 8). Collins and O’Rourke (2012) differentiate counseling services from financial coaching as being more expert-oriented and less collaborative.

For the most part, financial counseling has evolved from the credit and mortgage industries. Though credit counseling differs from interventions focused specifically on education or coaching, counseling services have components that share common characteristics with those types of programs (Roll & Moulton, 2016). For instance, “many agencies offer supplemental targeted education and general financial advice to improve clients’ money management; providing guidance, information, and resources on how to handle key financial issues like building emergency savings funds, budget management, and saving for retirement (Wang, 2010)” (as cited in Roll & Moulton, 2016, p. 5).

“A recent review of existing research argues that the effect of counseling on behaviors is promising but not conclusive (Collins & Rourke, 2012)” (as cited in Theodos et al., 2015, p. 8).

The primary obstacle facing these studies is that of selection bias (Caskey 2006; Hathaway & Khatiwada, 2008; Elliehausen, Lundquist, & Staten, 2007; Meier & Sprenger 2007; Willis, 2008; Collins, 2013), “as the very act of looking for participating in counseling may be a proxy for unobserved individual characteristics” (Theodos et al., 2015, p. 9). Although there is a long-standing literature on the effects of homeownership counseling (i.e., Quercia & Watcher, 1996; Hornburg, 2004), the “wide range of program types and a rapidly changing landscape after the late 2000s housing crash complicated efforts to rigorously study effects (Collins & Rourke, 2011)” (p. 9). This long-standing literature may provide insight into what components of homeownership counseling could be translated to a wider context of financial literacy, in general.

According to Gale and Levine (2010), the most compelling analysis is provided by Agarwal, Driscoll, Gabaix, and Laibson (2009), who conducted a study in the Chicago area that explored legislation that mandated counseling and third-party reviews of mortgage contracts in certain zip codes but not in others, allowing for the creation of treatment and control groups based on geographic area. The researchers “noted two possible sources of change in mortgage choice and default rates: direct information from the counseling, and increased oversight of mortgage loan contracts” (Gale & Levine, 2010, p. 15), and found “substantial evidence that the increased oversight of mortgage loan contracts affected the quality and quantity of mortgage lending, but little evidence that direct effects of counseling has a serious impact on default rates” (Gale & Levine, 2010, p. 15).

More recent research, including a study by the Federal Reserve Bank of Philadelphia, which integrated an experimental design with random assignment to study the effects of pre-purchase homeownership counseling on an array of financial outcomes, discovered that counseling was positively associated with lower default rates, better credit scores, less debt and fewer delinquencies (Smith, Hochberg, & Greene, 2014). In light of the recent foreclosure crisis, “more shock-driven interventions designed to guide clients through a well-defined process, such as foreclosure counseling, have also been studied and found to have positive effects (Collins & Schmeiser, 2013; Jefferson et al., 2012; Mayer et al., 2012; Temkin et al., 2014)” (as cited in Theodos et al., 2015).

Individualized credit counseling has been associated with improved credit profiles, including reductions in debt and account usage (Elliehausen et al., 2007), positive direct effects of credit counseling and debt management programs on “financial stressor events,” and indirect effects of perceived well-being and health (Kim, Garman, & Sorhaindo, 2003). However, studies in the credit counseling field have had mixed results due to limitations in scope and reliance on non-randomized samples and self-reports, which limits the strength of their findings (Roll & Moulton, 2016). This limitation also was found in the research on financial education, highlighting the complexity of identifying and measuring “effectiveness” of these programs.

At the higher education level, student loan counseling is an integral component of student financial literacy programs. Mandatory entrance and exit loan counseling modules, created in the 1980s, were updated in 2000 to include online access. Estimates suggest that 70 percent of federal student borrowers access the modules online. In an evaluation of both modules, a report by TG Research and Analytical Services (2013) noted that, for the most part, students skimmed over, or skipped ahead in the entrance and exit modules. With reference to the exit module, as Fernandez (2015) noted, “There’s so much information, but almost no counseling” (p. 18). “Overall, most institutions are not highly engaged with exit counseling unless the institutions are nearing the CDR that would threaten their Title IV financial aid

eligibility" (Steele & Anderson, 2016, p. 12). Many institutions partner with third-party vendors to provide default counseling to graduates.

A survey conducted by Access Group (Steele & Anderson, 2016) indicated that 58 percent of institutional respondents do not require student borrowers to enroll in any financial literacy programming beyond the federal requirement of entrance and exit counseling. More than half of the survey's respondents reported that they do not offer financial literacy programming to alumni. Only three financial literacy programs have been evaluated by third-party researchers: University of Arizona's Credit-Wise Cats program, the FDIC's Money Smart Curriculum, and FINRA's 'loveyourmoney.org' (see FLEC, 2016, pp. 12-13).

Improving student financial literacy and preventing loan default is important to colleges and universities not only as a student success issue, but also potentially as an economic and legal one (Steele & Anderson, 2016). Although as Steele and Anderson note, "there is currently no compelling reason for colleges and universities to double-down on default prevention because the cohort default rate (CDR) thresholds that trigger penalties by ED (U.S. Department of Education) are high enough that most schools are inconsistently or rarely held accountable for alumni's failure to repay loans (Alexander, 2015)."

The U.S. Senate is currently addressing legislation that would require institutions to participate in risk-sharing in federally funded loan programs, with the specific share to be dependent on the institution's CDR (Protect Student Borrowers Act, 2015). Other legislation being considered would deem institutions ineligible for certain federal programs if their cohort repayment rate falls below a predetermined percentage (Student Protection and Success Act, 2015). As Senator Lamar Alexander (2015) explains, having "risk-sharing, or a 'skin-in-the-game approach', may prompt institutions to invest more in students' financial health after completion and during repayment so that they do not lose key funding and are not forced to raise tuition" (as cited by Steele & Anderson, 2016, p. 4). Advocates for this approach believe that it may improve student success, especially for low-income populations (Kelchen, 2015).

Emerging interventions (cases to watch). An emerging set of interventions targeted at student borrowing and debt are being explored at institutions across the United States. The highest profile example is the set of programs implemented by Indiana University (IU) starting in the 2012-13 academic year (Darolia, 2016). "These initiatives were associated with a reduction in undergraduate borrowing across the system by about 16% (~\$44 million) over a 2 year period across the 7 campus system (Kennedy, 2015)" and consisted of "sending out debt letters to all student borrowers, including information about total debt accrued, estimated monthly payment, and remaining borrowing eligibility"⁸ (Darolia, 2016, p. 10). Given that the letter was just one of the many services initiated by the IU system to reduce borrowing, it remains unclear to what extent the information in the letter was the cause for reduction. Other services provided included: 1) creation of an Office of Financial Literacy that launched a series of programs aimed at reducing borrowing and enrolling in more credits per semester; 2) access to individual financial mentoring; and 3) access to other resources at lower costs among students who are on track to graduate on time. Students who received the financial counseling letters were more likely to switch their major to one in the higher-paying STEM fields, reduce their student loan borrowing, and increase retention rates for subsequent semester and year for freshmen. Furthermore, receiving a letter increases credits attained that

⁸ THECB has a legislative priority to replicate the IU letter. <http://www.thecb.state.tx.us/reports/PDF/8147.PDF?CFID=48520912&CFTOKEN=73839410>

semester and increases GPA. "These results suggest that early interventions that draw borrowers' attention to their relatively high student loan debt balances and that offer information and financial counseling on managing their debt, can improve student academic outcomes and change financial decisions" (Schmeiser, Stoddard, & Urban, 2015, p. 5).

Connected to the reported success of the IU borrowing interventions, Indiana and Nebraska passed legislation mandating that information be provided to all college students who borrow. A similar program at Montana State University, "Know Your Debt," was initiated and subsequently evaluated by Schmeiser, Stoddard, and Urban (2015). Students whose cumulative borrowing debt exceeded identified thresholds of \$6,250 for freshman, \$12,000 for sophomores, \$18,750 for juniors, and \$25,000 for seniors received a debt letter that included a reminder about total cumulative borrowing, strategies to reduce borrowing, and encouragement to graduate. The students were provided access to meetings with certified financial planners and a financial incentive to do so (a \$20 gift card), and access to personal meetings with career coaches. Using a difference-in-difference approach, researchers compared recipients of the debt letter to those who had loans but were below the threshold level; to students at the University of Montana who would have received the letter had the policy been in place on that campus; and, to those students who would have received the letter years before the policy was implemented (Schmeiser et al., 2015). Letters encouraged students to learn more about how to deal with debt, to take at least 12 credits to take advantage of constant tuition rates above the threshold, and to make an appointment with a financial coach, followed by a one-hour appointment with a certified financial planner (CFP) in the following year.

In contrast to the results reported at IU, results of the MSU study did not provide evidence that the information letter affected the average amount that students borrowed overall. While there were some modest behavior changes among some student groups, there were substantially smaller borrowing effects across all students in comparison with other more intensive institution-based initiatives related to student borrowing (Kennedy, 2015; Schmeiser et al., 2015). "This suggests that information alone is not sufficient to drive systematically different borrowing choices among students and that other supports are likely necessary to affect behavior" (Darolia, 2016, p. 25). Finally, although there are no observable changes in year-to-year borrowing due to letter in these data, "there is evidence that the letter induced a positive outcome, namely information seeking among students" (p. 26). As Darolia (2016) notes, "there is value to encouraging a more informed student body" (p. 26).

Notably, these studies complement the work of other researchers who are conducting experiments to further understand the role of information in student loan decisions and the impact of financial counseling. For instance, Barr, Bird, and Castleman (2016) "sent text messages to mostly adult students at a large community college system, encouraging them to make active decisions related to loans and found substantial reductions in borrowing, particularly among minority, new, and low-income students" (Darolia, 2016, p. 12). In addition, in altering the default student loan offering assigned to students at two community colleges in the Midwest, Marx and Turner (2016) found that students were biased toward borrowing the amount listed in their financial aid offers.

Financial Coaching

In recent years, financial coaching has emerged as a complement to financial education and counseling, sharing some elements with financial counseling, such as a general focus on one-to-one, coach-client interactions (Collins, Baker, & Gorey, 2007). Financial coaching is similarly targeted at improving financial literacy and behavior of clients. Coaching differs from

counseling by “focusing on improving financial behavior and attaining financial goals over the long term, rather than focusing on how to resolve a specific triggering event or crisis” (Theodos et al., 2015, p. 10).

While there is no credential specific to financial coaching as of 2011, according to the University of Wisconsin-Madison Center for Financial Success, by late 2014, there were at least 12 organizations offering continuing education units for credentialing purposes (Asset Funders Network, 2014). Groups such as NeighborWorks, The Financial Clinic, and Central New Mexico Community College’s CNM Connect offer online, individual, and group-based training.

Of note to higher education, in 2011, the CNM Connect partnered with Achieving the Dream and MDC (a nonprofit with experience in developing economic and workforce development strategies for communities, institutions, and individuals), and with funding from the Bank of America Charitable Foundation, worked with three community colleges – Los Angeles Harbor College, the Community College of Baltimore County, and the Houston Community College System – as part of the Financial Empowerment for Student Success Initiative (FESS). CNM Connect offered intensive financial coaching training and served as an advisor on the design and launch of the Working Families Success Network Community College expansion in 2014. The three grantee colleges are now part of a national initiative working to make financial capability an integral part of community colleges’ activities.

Lessons learned from the initiative include: 1) financial capability training is effective, 2) solutions must be specific to the college, 3) staged development may make sense for implementing financial capability programs, 4) institutional buy-in is critical, 5) higher intensity services require more resources, 6) collecting data is difficult but critical, and 7) community partnerships increase program impact (Broun, Austin & Bryant, 2014).

Financial coaching, as practiced currently, varies in many aspects of implementation, and is a fairly expensive and high-contact intervention in comparison to other approaches. As a relatively new approach, there is much to learn about its impact on clients and its feasibility on college and university campuses.

Current and Emerging Types of Financial Literacy Programs on Campus

There is no singular or perfect model for a financial literacy program on campus. The creation of existing programs, for the most part, has been driven by availability of resources, such as funding, space, staffing, and level of staff expertise. Common features of financial education programs are that they engage in prevention (i.e., teaching students how to manage credit) and/or intervention (i.e., identifying loan repayment plans). The Coalition of Higher Education Assistance Organizations (COHEAO, 2014) has identified four program delivery models: 1) financial education/counseling centers, 2) peer-to-peer programs, 3) programs delivered by financial professionals, and 4) distance learning programs. The most prevalent and successful delivery methods include: 1) interactive online programs, 2) classroom-based programs, 3) game-based education programs, 4) event-based programs, and 5) individual counseling (COHEAO, 2014). The following sections will provide examples of these various delivery methods.

Interactive online programs

Interactive online programs can be text-based or multimedia, and typically include an assessment tool to monitor learning. Interactive online programs are gaining popularity since they are relatively cost efficient, easy to scale, accessible, allow students to learn at their own pace and work around their schedules, and appeal to the technology-literate Millennials and Generation Z students (see separate “Opportunities to Improve the Financial Capability and Financial Well-Being of Postsecondary Students,” FLEC, 2016, p. 20). CashCourse (NEFE), loveyourmoney.org (FINRA), and MyMoney.gov (FLEC) offer widely used online resources and curricula. Other online sources include Financial Awareness and Consumer Training for Students (FACTS) (HESC), Financial Literacy 101 (Decision Partners), OnTrack Financial Education and Counseling, SALT Money (ASA), Society for Financial Education and Professional Development (SFE&PD), TG Student Financial Education Program, and USA Funds for Life Skills (see “Opportunities to Improve the Financial Capability and Financial Well-Being of Postsecondary Students,” FLEC, 2016, pp. 30-31).

Classroom-based programs

Classroom-based financial literacy programs come in a variety of forms, including a semester-length course taught by a personal financial planning or business faculty, or one in which guest lectures are provided by a financial counseling center representative or a local financial planner. A recent publication by FLEC (2016) identifies 31 exemplary on-campus programs (see “Opportunities to Improve the Financial Capability and Financial Well-Being of Postsecondary Students” – Financial Education Program Matrix, FLEC, 2016, pp. 18-29), including three Texas institutions of higher education (University of North Texas, Sam Houston University, and Texas Tech University), all of which consistently have been lauded nationally for their financial literacy programs. Beyond Texas, programs at the University of Arizona, Champlain College, University of Georgia, Indiana University, and Skyline College also frequently surface in the literature as examples of best practices. Many of these programs incorporate individual counseling provided by professional staff members or student peers.

Game-based programs

Game-based programs promote active learning, experiential learning, and problem-based learning and include simulations, contests, board games, card games, as well as electronic games, and combinations thereof. Examples can be found online at iGrad, MoneyTopia, and Money U (see “Opportunities to Improve the Financial Capability and Financial Well-Being of Postsecondary Students,” FLEC, 2016, pp. 30-31). FLEC (2016) identifies examples of special events at several colleges: Tyler Junior College, TX; Georgia Perimeter College, GA; Indian Hills Community College, IA; Old Dominion University, VA; Keene State College, NH; Jefferson Community and Technical College, KY; and SUNY Brockport, NY, that raise awareness of existing financial literacy programs and services on campus (pp. 9-10).

Event-based programs

Event-based programs include special events that are designed to raise awareness and initiate planned financial literacy programs and services. Most colleges that offer financial literacy programs incorporate events in some component of their programming. One of the major benefits of blending events into the financial literacy planning efforts is the ability to attract large numbers of students or a specific target group of students. Examples cited by

COHEAO include The Squeaky Clean Credit event at Tyler Junior College in Texas, in which students receive food and a laundry package with coins for a free wash, and a Walking and Talking Money interactive financial literacy game show hosted at Indian Hills Community College in Iowa.

Individual counseling

As discussed previously, on-campus individual financial counseling for students typically is provided by professional staff members or student peers, and can consist of guiding students over time to manage their personal finances, or dealing with remedial concerns, such as financial distress and problems. In some instances, colleges contract out their financial counseling services to third-party organizations.

Financial Education Certification Programs

As the need for access to financial education and/or counseling programs has grown, so too has the demand and recognition for qualified instructors to facilitate those programs. Research reveals that many K-12 and postsecondary instructors do not feel qualified or comfortable teaching personal finance topics (Way & Holden, 2010), and in all likelihood, many postsecondary instructors share those sentiments. In 2011, the federal government established a process for approving financial education certification programs. Both governmental and nongovernmental entities have certification processes or confer designations related to financial literacy.

Non-governmental entities

For example, the Institute for Financial Literacy (IFL), which was created in 2002, is a nonprofit organization whose mission is to make effective financial education available for all American adults (IFL, 2007). In 2006, the IFL joined with Fincert.org, the former Center for Financial Certifications, to provide five types of certifications: Certified Personal Finance Counselor (CPFC), Certified Educator in Personal Finance (CEPF), Certified Residential Housing Counselor, Certified Receivables Counselor, and Certified Consumer Debt Specialist.

Other organizations offering certification include: 1) the American Association of Family and Consumer Sciences (AAFCS), 2) the Association for Financial Counseling, Planning and Education (AFCPE), 3) the Center for Financial Social Work, 4) the Heartland Institute for Financial Education—CFE Certified Financial Educator, 5) the National Association of Certified Credit Counselors (NACC), and 6) NeighborWorks America and its NeighborWorks Center for Homeownership Education.

Teacher training certifications

Although not offering formal certification, the Champlain College Center for Financial Literacy provides resources for educators, including access to a professional community website, TeachFinLit.org, and has piloted a teacher-training program in Vermont. In an attempt to standardize teacher training in personal finance through a shared model, the Jump\$tart Coalition for Personal Finance Literacy formed an alliance with the Council for Economic Education (CEE), Junior Achievement USA, (JA USA), National Endowment for Financial Education (NEFE), and Take Charge America Institute at the University of Arizona, as well as developed Jump\$tart Financial Foundations, with valuable insight from the Federal Deposit Insurance Corporation (FDIC), the U.S. Department of the Treasury, and the U.S. Department

of Education. The U.S. Securities and Exchange Commission has joined the five founding members of the alliance. “After three years of pilot testing and research, the model was publicly launched in 2013, and is now available at no cost to qualified users committed to supporting financial education through professional development for teachers” (<http://www.jumpstart.org/10242014-jumpstart-teacher-training-alliance.html>).

More recently, the Consumer Financial Protection Bureau (CFPB), an organization created by the Dodd-Frank Wall Street Reform and Consumer Protection Act to improve the literacy of Americans, released a comprehensive teaching model to assist educators in identifying learning and teaching strategies to build the financial capability of youth throughout K-12 school years. In addition, a partnership between PwC, Digital Promise, and the Global Financial Literacy Excellence Center (GFLEC) at The George Washington University has created twenty micro-credentials, which are digital badges teachers can earn to demonstrate competency in specific personal finance areas (<http://gflec.org/education/financial-literacy-micro-credentials>).

Despite the progress made in the preparation and certification of financial educators, the FLEC (2016), however, continues to highlight the need for colleges and universities to “enhance the current supply and ensure the future supply of skilled financial instructors” (p. 14).

Conclusion

Postsecondary education is a critical component in maintaining the economic health and well-being of our nation, yet increasingly the cost of higher education may be deterring some students and families—particularly those from low- and middle-income households and minority groups—from obtaining it. Choosing when, where, and how to invest in education is, in and of itself, an extremely complicated decision (Lusardi, 2010) and one for which many individuals are often unprepared and uninformed. One half of all freshmen borrow to pay for their education, and in the process, will make decisions that will affect their financial futures in ways they likely do not yet comprehend. Nontraditional students face similar challenges and opportunities in navigating higher education decisions, as well as the additional challenges in managing their more complex lives (FLEC, 2016). In addition to paying for their education, in transitioning to college, young adults will make a number of other important and sophisticated financial decisions—from using a credit card, opening a bank account, or securing an auto loan. Without exposure to financial education, counseling, or coaching, many students find the “variables involved in making accurate financial decisions abstruse or inaccessible” (Goetz, et al., 2011).

The U.S. Department of Education has recognized the challenges associated in “Choosing Where to Go and How to Finance Postsecondary Education and Making Sound Financial Decisions When Enrolled and Beyond,” and as outlined in “Opportunities to Improve the Financial Capability and Financial Well-Being of Postsecondary Students” (FLEC, 2016), has created multiple tools and resources to help families and students in the decision-making process. While these tools can assist individuals in what can be the very arduous task of selecting and financing one’s postsecondary education, students also need to develop knowledge and skills to cope with the financial challenges during and beyond college. “Building financial capability is an important strategy for promoting college access and completion, as well as lifelong financial health” (FLEC, 2016).

References

- Agarwal, S., Driscoll, J., Gabaix, X., & Laibson, D. (2009). The age of reason: Financial decisions over the life cycle with implications for regulation. *Brookings Papers on Economic Activity*, 2009(2), 51-117.
- Alexander, L. (2015). Risk-sharing/skin-in-the-game concepts and proposals. Washington, D.C.: Senate Committee on Health, Education, Labor, and Pensions.
- Ameriks, J., Caplin, A., & Leahy, J. (2002). Wealth accumulation and the propensity to plan. (No. 8920). Cambridge, MA: National Bureau of Economic Research.
- Asset Funders Network. (2014, December 1). Strategies for investing in financial coaching: A grantmaker briefing and roundtable. Hosted by the Annie E. Casey Foundation. Retrieved from <http://www.communityscience.com/images/AECF%20Financial%20Coaching%20Presentation%20.pdf>.
- Barr, A., Bird, K., & Castleman, B. L. (2016). Prompting active choice among high-risk borrowers: Evidence from a student loan counseling experiment. *EdPolicyWorks*, 2016(41), 1-13.
- Bernheim, B. D., Garrett, D. M. & Maki, D. (2001). The effects of financial education in the workplace: Evidence from a survey of households. *Journal of Public Economics*, 87(7), 1487-1519.
- Broun, D., Austin, C., & Bryant, J. (2014). *Building capability, empowering students, and achieving success: The financial empowerment student success initiative*. Achieving the Dream, Inc. & MDC.
- Brown, M., Grigsby, J., van der Klaauw, W., Wen, J., & Zafar, B. (2016). Financial education and the debt behavior of the young. *The Review of Financial Studies*, 29(9), 2490-2522.
- Caskey, J. (2006). Can personal financial management education promote asset accumulation by the poor? *Networks Financial Institute*, (Policy Brief 2006-PB:06).
- Coalition of Higher Education Assistance Organizations (COHEAO). (March 2014). *Financial literacy in higher education: The most successful models and methods for gaining traction*. Retrieved from <http://coheao.com/wp-content/uploads/2014/03/2014-COHEAO-Financial-Literacy-Whitepaper.pdf>.
- Cole, S., & Shastry, G. (2010). Is high school the right time to teach savings behavior? The effect of financial education and mathematics courses on savings. Harvard Business School/Wellesley College. Retrieved from <http://www.people.hbs.edu/scole/Papers&Publications/Working/High%20School.pdf>.
- Collins, M. J., Baker, C., & Gorey, R. (2007). *Financial coaching: A new approach for asset building?* Baltimore, MD: The Anne. E. Casey Foundation. Retrieved from <http://www.aecf.org/resources/financial-coaching/>.
- Collins, J. M., & O'Rourke, C. (2011). Homeownership education and counseling: Do we know what works? *Research Institute for Housing America Research Paper*, (1102).
- Collins, J. M., & O'Rourke, C. (2012). Still holding out promise: A review of financial literacy education and financial counseling studies. *Network Financial Institute: Working Paper Series*, (2012-WP-02).

- Collins, J. M., & Schmeiser, M. (2013). The effects of foreclosure counseling for distressed homeowners. *Journal of Policy Analysis and Management*, 32(1):83-106.
- Collins, J. M. (2013). The impacts of mandatory financial education: evidence from a randomized field study. *Journal of Economic Behavior & Organizations*, 95:146-158.
- Collins, J.M., Stoddard, C., & Urban, C. (2016). *The effects of financial education on student loan amounts*. Retrieved from <http://gflec.org/wp-content/uploads/2016/04/Collins-J.-Michael-Stoddard-Christiana-and-Urban-Carly-The-Effects-of-Financial-Education-on-Student-Loan-Amounts-FINAL.pdf>.
- Combs, S. (2014). *Student loan debt report*. Austin, TX: Texas Comptroller Office.
- Consumer Financial Protection Bureau (CFPB). (January 2014). *Rigorous evaluation of financial capability strategies: Why, when, and how. Perspectives from the field*. Washington, D.C.: CFPB. Retrieved from: http://files.consumerfinance.gov/f/201401_cfpb_report_rigorous-evaluation-financial-capability.pdf.
- Council for Economic Education. (2016). *Survey of the states. Economic and personal finance education in our nation's schools 2016*. Retrieved from: <http://councilforeconed.org/wp/wp-content/uploads/2016/02/sos-16-final.pdf>.
- Darolia, R. (June 2016). *An experiment on information use in college student loan decisions. Federal Reserve Bank of Philadelphia Working Paper Series*, (16-18).
- Department of the Treasury. (2008). President's advisory council on financial literacy. 2008 annual report to the President. Executive summary. Washington, D.C.: The Treasury Department. Retrieved from https://www.treasury.gov/about/organizational-structure/offices/Domestic-Finance/Documents/exec_sum.pdf.
- Elliehausen, G., Lundquist, C., & Staten, M. E. (2007). The impact of credit counseling on subsequent borrower behavior. *Journal of Consumer Affairs*, 41(1), 1-28.
- EverFi. (2016). *Money matters. Examining financial attitudes and behaviors of two-year and four-year college students*. Higher One & EverFi White Paper. Retrieved from http://moneymattersoncampus.org/wp-content/uploads/2016/04/EverFi_WhitePaper_2016_FINAL-Web.pdf
- Federal Reserve Bank of New York. (2016). *Quarterly report on household debt and credit: February 2016*. Federal Reserve Bank of New York.
- Fernandes, D., Lynch Jr, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 60(8), 1861-1883.
- FINRA Investor Education Foundation. (January 2015). *Insights: financial capability*. Retrieved from <https://www.finra.org/sites/default/files/investoreducationfoundation.pdf>.
- FINRA Investor Education Foundation. (2016). *National financial capability study*. Retrieved from <http://www.usfinancialcapability.org/>.
- Financial Literacy and Education Commission (FLEC). (2011). *Promoting financial success in the United States: National strategy for financial literacy*. Retrieved from [https://www.treasury.gov/resource-center/financial-education/Documents/NationalStrategyBook_12310%20\(2\).pdf](https://www.treasury.gov/resource-center/financial-education/Documents/NationalStrategyBook_12310%20(2).pdf).

- Financial Literacy and Education Commission (FLEC). (2016). *Opportunities to improve the financial capability and financial well-being of postsecondary students*. Washington, D.C.: Department of the Treasury.
- Gale, W. G., & Levine, R. (2010). Financial literacy: What works? How could it be more effective? Retrieved from <https://www.brookings.edu/research/financial-literacy-what-works-how-could-it-be-more-effective/>.
- Gerardi, K., Goette, L., & Meier, S. (2010). Financial literacy and subprime mortgage delinquency: Evidence from a survey matched to administrative data. *Federal Reserve Bank of Atlanta Working Paper Series*, (2010-10).
- Goetz, J., Cude, B. J., Nielsen, R. B., Chatterjee, S. & Mimura, Y. (2011). College-based personal finance education: Student interest in three delivery methods. *Journal of Financial Counseling and Planning*, 22(1), 27-42.
- Harnisch, T. L. (Fall 2010). Boosting financial literacy in America: A role for state colleges and universities. *Perspectives*.
- Hastings, J. S., Madrian, B. C., & Skimmyhorn, W. L. (2013). Financial literacy, financial education and economic outcomes. *Annual Review of Economics*, 5(1), 347-373.
- Hathaway, I., & Khatiwada, S. (2008). Do financial education programs work? *Federal Reserve of Cleveland Working Paper*, (08-03).
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 89, 309.
- Hornburg, S. (2004). *Strengthening the case for homeownership counseling: Moving beyond a little bit of knowledge*. Cambridge, MA: Harvard University.
- Hung, A., Parker, A.M., & Yoong, J. (2009). Defining and measuring financial literacy. *RAND Working Paper Series*, (WR-708). Retrieved from http://www.rand.org/content/dam/rand/pubs/working_papers/2009/RAND_WR708.pdf.
- Institute for Financial Literacy (IFL). (2007). National standards for adult financial literacy education. Retrieved from <https://financiallit.org/wordpress/wp-content/uploads/2013/06/NationalStandardsBenchmarks.pdf>.
- Jefferson, A., Spader, J., Tumham, J., & Moulton, S. (2012). *Foreclosure counseling outcome study: Final report*. Washington, D.C.: US Department of Housing and Urban Development, Office of Policy Development and Research.
- Jump\$tart Coalition for Personal Finance Literacy. (2010). Best practices for financial education materials. D.C.: Jump\$tart Coalition for Personal Financial Literacy. Retrieved from [http://www.jumpstart.org/assets/files/2010_J\\$-BestPracticesMaterials.pdf](http://www.jumpstart.org/assets/files/2010_J$-BestPracticesMaterials.pdf).
- Jump\$tart Coalition for Personal Finance Literacy. (2015). *National standards in K-12 personal finance education* (4th ed.). Washington, D.C.: Jump\$tart Coalition for Personal Financial Literacy.
- Jump\$tart Coalition for Personal Finance Literacy. (2008). Financial literacy still declining among high school seniors. Jump\$tart's Coalition's 2008 Survey.
- Kelchen, R. (2015). *Promising a federal risk-sharing policy*. Washington, D.C.: Lumina Foundation.

- Kennedy, J. (2015). *Indiana university student loan debt initiatives*. Testimony before the US Senate Committee on Health, Education, Labor, and Pensions.
- Kim, J., Garman, E. T., & Sorhaindo, B. (2003). Relationships among credit counseling clients' financial well-being, financial behaviors, financial stressor events, and health. *Journal of Financial Counseling and Planning*, 14(2), 75-87.
- Lusardi, A., & Tufano, P. (2009). Debt literacy, financial experiences, and over indebtedness. *NBER Working Paper*, (14808).
- Lusardi, A. (2010, October 4). Financial literacy and ignorance. (Web log post). Retrieved from <http://annalusakardi.blogspot.com/>.
- Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs*, 44(2): 358-380.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5-44.
- Mahdavi, M., & Horton, N. J. (2014). Financial knowledge among educated women: Room for improvement. *Journal of Consumer Affairs*, 48(2), 403-417.
- Mandell, L. (2009). *The financial literacy of young American adults. Results of the 2008 national Jump\$tart Coalition survey of high school seniors and college students*. Washington, D.C.: Jump\$tart Coalition.
- Marx, B., & Turner, L. (2016). *Nudging students toward better borrowing decisions*. Unpublished Manuscript. University of Illinois & University of Maryland.
- Mayer, N., Tatian, P. A., Temkin, K., & Calhoun, C. (2012). *Has foreclosure counseling helped troubled homeowners? Evidence from the evaluation of the national foreclosure mitigation counseling program*. Washington, D.C.: Urban Institute.
- Meier, S., & Sprenger, C. (2007). Selection into financial literacy programs: Evidence from a field study. *Federal Reserve Bank of Boston*, (Policy Discussion Paper 07-5).
- Miller, M., Reichelstein, J., Salas, C., & Zia, B. (2014). Can you help someone become financially capable? A meta-analysis of the literature. *The World Bank Development Research Group, Policy Research Working Paper*, (6745).
- Moore, D. (2003). *Survey of financial literacy in Washington State: Knowledge, behavior, attitudes, and experiences. Technical Report*, (03-39). Pullman, WA: Social and Economic Research Center.
- Phinney, J. S., & Haas, K. (2003). The process of coping among ethnic minority first-generation college freshman. *The Journal of Social Psychology*, 142(6), 707-726.
- Pinto, M. B., Parente, D. H., & Palmer, T. S. (2001). College student performance and credit card usage. *Journal of College Student Development*, 42(1), 49-58.
- Quercia, R. G., & Wachter, S. M. (1996). Homeownership counseling performance: How can it be measured? *Housing Policy Debate*, 7(1), 175-200.
- Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276-95.
- Roberts, J. A., & Jones, E. (2001). Money attitudes, credit card use, and compulsive buying among American college students. *The Journal of Consumer Affairs*, 35, 213-240.

- Roll, S., & Moulton, S. (2016). *The impact of credit counseling on consumer outcomes: Evidence from a national demonstration program. Working Draft*. The Ohio State University and the National Foundation for Credit Counseling. Retrieved from <http://gflec.org/wp-content/uploads/2016/04/Roll-Stephen-and-Moulton-Stephanie-The-Impact-of-Credit-Counseling-on-Consumer-Outcomes.pdf>.
- Schmeiser, M., Stoddard, C., & Urban, C. (2015). *Does salient financial information affect academic performance and borrowing behavior among college students? Finance and economics discussion series*. Washington, D.C.: Federal Reserve Board.
- Shim, S., Serido, J., & Xiao, J. J. (2009). *Arizona pathways to life success for university students: Cultivating positive financial attitudes and behaviors for healthy adulthood*. Tucson, AZ: The University of Arizona.
- Smith, M. M., Hochberg, D., & Greene, W. H. (2014). The effectiveness of pre-purchase homeownership. *Federal Reserve Bank of Philadelphia Working Paper*.
- Steele, P., & Anderson, C. (March 2016). Loan counseling for graduate and professional students: The need for expanded financial literacy education. Access Group Center for Research & Policy Analysis Research Paper, (16-020). Retrieved from <https://www.accessgroup.org/loan-counseling-graduate-and-professional-students>.
- Temkin, K., Mayer, N. S., Calhoun, C. A., Tatian, P. A., & George, T. (2014). *National foreclosure mitigation counseling program evaluation*. Washington, D.C.: NeighborWorks America.
- Texas Higher Education Coordinating Board (THECB). (2015). *60x30TX: The Texas higher education strategic plan, 2015-2030*. Austin, TX: THECB.
- TG Research and Analytical Services (TG). (December 2013). Behind the numbers: Making sense of cohort default rates. Round Rock, TX: TG.
- Theodos, B., Brash, R., Simms, M., Eman, D., Treskon, M., Daniels, R., Stacy, C., & Collazos, J. (October 2015). An evaluation of the impacts and implementation approaches of financial coaching programs. *Research report*. The Urban Institute. Retrieved from: <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000448-An-Evaluation-of-the-Impacts-and-Implementation-Approaches-of-Financial-Coaching-Programs.pdf>.
- Urban, C., Schmeiser, M., Collins, J. M., & Brown, A. (2015). State financial education matters: It's all in the implementation. FINRA Investor Education Foundation. Retrieved from <https://www.finra.org/sites/default/files/investoreducationfoundation.pdf>.
- Wagner, J., & Walstad, W. B. (2016). The effects of financial education on short-term and long-term financial behaviors. Retrieved from <http://gflec.org/wp-content/uploads/2016/04/Wagner-Jamie-and-Walstad-William-The-Effects-of-Financial-Education-on-Short-term-and-....-FINAL.pdf>.
- Wang, J. J. (2010). Credit counseling to help debtors regain footing. *Journal of Consumer Affairs*, 44(1), 44-69.
- Way, W., & Holden, K. C. (2010). Teachers' background and capacity to teach personal finance: Results from national survey. AFCPE conference paper. Retrieved from <https://www.fdic.gov/about/comein/Mar3.pdf>.

Willis, L. E. (2008). Against financial literacy education. *Iowa Law Review*, 94, 08-10.



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