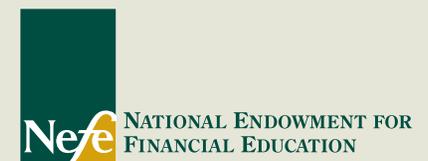




Financial Capabilities of College Students from States with Varying Financial Education Policies

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Partnering for Financial Well-Being

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Introduction

Young adults often begin their college careers without ever having been solely responsible for their own personal finances. These students arrive on college campuses lacking basic financial knowledge. Because of this, the financial behaviors of emerging adults (ages 18–24 years) is an area of attention and concern for educators and others interested in their financial well-being.

During the past several decades, many states have adopted personal financial programs on topics such as budgeting and credit management for delivery to high school students. By 2007, 40 states included personal finance in their high school educational

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standards—almost twice the number of states with personal finance standards in 1998. Today, 46 states have financial education standards, up from 21 states in 1998,

clearly demonstrating that policymakers recognize the importance of high school financial education to the financial well-being of students and young adults. However, new research suggests that merely having standards is not enough, and states with existing standards are seeking to evaluate their effectiveness.

In a study funded by the National Endowment for Financial Education® (NEFE®) and completed in December 2009, Dr. Michael Gutter of the University of Florida examined the relationship between exposure to varying state mandates about high school financial education and college students' financial capability. Gutter found that to be most effective, states should go beyond simply setting standards to requiring a financial education course.

Terms Used in This Study

Financial Behaviors: Financial behaviors measured in the study were: **budgeting**, **saving**, and **credit card usage**.

- Positive financial behaviors studied were: **using a budget**, **saving regularly**, and **engaging in responsible credit use**.
- Risky credit behaviors studied were: **maxing out a credit card**, **making late payments on credit cards**, and **not paying off credit card balances in full each month**.

Financial Dispositions: Financial dispositions measured in the study were:

- **Materialism:** The value one places on material possessions.
- **Compulsive buying:** An obsession with spending or pathological spending patterns.
- **Self-efficacy:** The belief that one can be successful in his or her personal financial management.
- **Future orientation:** A measure of the extent to which one considers future versus immediate consequences when making decisions.
- **Willingness to take investment risk:** An indicator of risk tolerance or the amount of risk one is willing to accept for a possible gain.

Surveying States and Students

In 2008, Gutter electronically surveyed students at 15 geographically diverse college campuses across the United States to assess their financial knowledge, financial dispositions, and financial behaviors. Gutter then organized student responses by the type of high school financial education policy the student's home state had in place. Each state fell into one of six categories, ranging from: states without standards and states with standards that were or were not implemented to states that required a financial education course, an assessment, or both.

Gutter characterized state policy categories as those that ideally would produce students with high levels of financial knowledge, positive financial dispositions (such as low materialism or low compulsive buying), and positive financial behaviors (such as paying off credit card balances in full each month or refraining from "maxing out" a line of credit).

Reviewing the Results: Well-educated Students Exhibit Positive Financial Behaviors

After analyzing data from 15,797 college students, 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

Gutter's final report, *Financial Management Practices of College Students from States with Varying Financial Education Mandates*, concludes that the remaining states without standards clearly should consider adopting standards as a minimum. The ideal situation is for states to adopt standards that require courses and assessment, because requiring a course was the only policy to be positively related to the likelihood of students engaging in positive financial practices.

About this Study

States were characterized into one of six categories based on the state's financial education policies in 2004 (NCEE, 2005). These six policy categories are:

- 1 No Standards
- 2 Standards Only with No Required Implementation
- 3 Standards with Required Implementation
- 4 Course Required
- 5 Assessment Required
- 6 Course and Assessment Required

Data were collected during the spring and fall of 2008 from 15,797 students at 15 college campuses around the country. These students typically would have graduated high school between spring 2004 and spring 2008. Thus, the policies in place during 2004 were used for this study because later policy changes may not have affected many of the students in college in 2008.

Figure 1: College Campuses Included in the Survey

1. No Standards

California State University at Northridge
Iowa State University
University of Florida
University of Rhode Island

2. Standards Only with No Required Implementation

University of Alabama
University of Vermont
University of Wisconsin

3. Standards with Required Implementation

Purdue University
The University of Arizona

4. Course Required

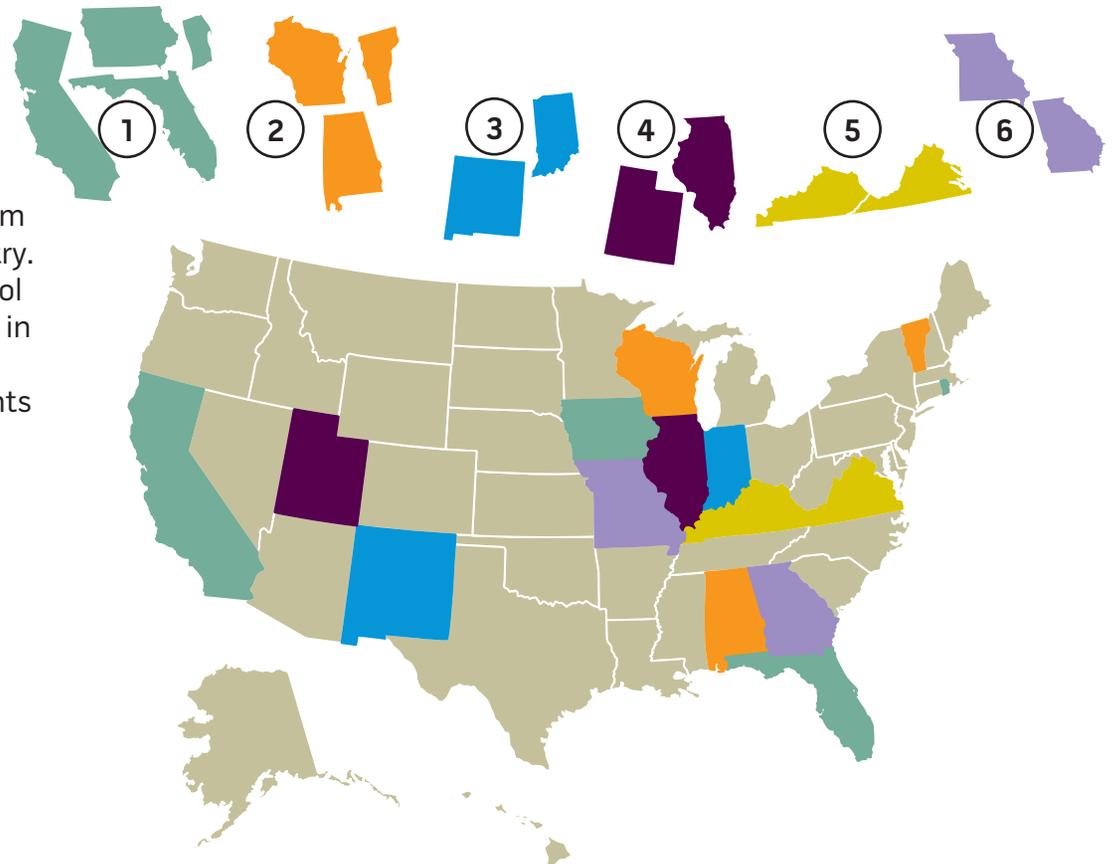
Illinois State University
University of Utah

5. Assessment Required

University of Kentucky
Virginia State University

6. Course and Assessment Required

University of Georgia
University of Missouri



Campuses and Students Surveyed

The study's target campuses were large state universities (see Figure 1). Random lists of student e-mail addresses were obtained for each campus and the sample was limited to currently enrolled students age 18 or older. Students were e-mailed the survey questions three times over the course of one month. A total of 172,412 students received e-mails three times and a total of 15,797 valid responses were received.

The average age of respondents was 21.3 years and almost all respondents (94.3 percent) were full-time students. Of the respondents, 65.8 percent were female, 83.3 percent were white, 85.7 percent were single, and 27.4 percent were senior class students. This sample profile is comparable to the national averages for college students, as shown in **Table 1**.

Table 1: Demographics of Study Respondents Compared to National Averages for College Students

	SURVEY RESPONDENTS	AVERAGES FOR COLLEGE STUDENTS ¹
Gender: Female	65.8%	62.7%
Race: White	83.3%	69.8%
Marital Status: Single	85.7%	58.1%
Class Rank: Senior	27.4%	27.8%

¹NASPA, 2008

NOTE: THE PROPORTIONAL DIFFERENCE BETWEEN THE STUDY SAMPLE AND THE NATIONAL AVERAGES IS PARTIALLY EXPLAINED BY THE FACT THAT THE STUDY SAMPLE INCLUDED ONLY PUBLIC UNIVERSITIES.

Positive financial dispositions studied were **low materialism, low compulsive buying, high financial self-efficacy, high future orientation, and some willingness to take investment risk.**

Financial Education: In addition to collecting data about the policy category of the state from which the respondent attended high school, respondents were asked whether they ever had been taught about personal finance in school (although a state might not have required personal finance, individual school districts or teachers may have chosen to offer a class). The study also asked whether respondents ever had taken a course, program, or seminar on personal finance issues in their community, at a religious institution, or at any organization other than their high school.

Financial Knowledge: Financial knowledge is related to one's understanding of key financial terms and concepts needed to function daily in American society, including knowledge about items related to banking; auto, life, health, and homeowners' insurance; using credit; taxes; and investing (Bowen, 2002). Financial knowledge was measured:

- Objectively (via a quiz)
- Subjectively (self-reported by the respondent)
- Relatively (how respondents perceived their knowledge as compared to peers: better, same, or worse)

Social Learning Opportunities: Social learning opportunities included discussions and observations of parents and peers. For both parents and peers, students were asked how often in the past five years they discussed or observed behavior related to the following topics:

- Managing expenses and avoiding overspending
- Checking one's credit report
- Paying bills on time
- Saving and investing
- Working with a mainstream financial institution
- Buying or maintaining health insurance
- Buying or maintaining auto insurance
- Buying or maintaining renters'/homeowners' insurance

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Policy Category: Each state was placed in one of six policy categories based on whether the state had mandated financial literacy standards and/or policies as of 2004: No Standards, Standards Only, Standards with Required Implementation, Course Required, Assessment Required, and Course and Assessment Required.

State Standards

In 2007, 40 states had mandated standards for personal finance education. Of those 40 states, 28 required the standards to be implemented. In addition, only nine states required a course with personal finance content, seven states required students to take a personal finance course, and nine states tested personal finance. Since 1998, a clear trend has emerged of states moving to adopt a policy, as well as greater enforcement within those policies, as shown in **Table 2**.

Outcome Indicators

This study used three categories of financial outcome indicators—financial dispositions, financial knowledge, and financial behaviors—to assess the effectiveness of state policies regarding high school financial education. A “successful” policy category ideally would produce students with:

- High levels of financial knowledge.
- Positive financial dispositions—such as low materialism, low compulsive buying, high financial self-efficacy, high future orientation, and some willingness to take investment risk.
- Positive financial behaviors—such as saving regularly, using a budget, and engaging in responsible credit use (paying off credit card balances in full each month, making payments on time, and refraining from maxing out lines of credit).

Table 2: States with Personal Finance Education in High Schools: A Comparative Look (1998–2007)¹

TOPICS	1998	2000	2002	2004	2007	TOTAL INCREASE (1998–2007)
Include personal finance in their standards	21	40	31	34	40	19
Standards required to be implemented	14	16	16	20	28	14
Course required to be offered	0	7	7	7	9	9
Course required to be taken	1	4	4	6	7	6
Testing of personal finance concepts required	1	6	6	8	9	8

¹NCEE, 2007

What We Found

In relation to students' exposure to financial education, the study identified positive behavior links, significant influences in students' lives, and the role of social learning—leading to a recommendation that states require a personal finance course.

Students' Exposure to Financial Education

Most students (61.8 percent) who graduated high school from states in the Course Required category were taught personal finance in high school. In all other categories, only about one-third of the students (ranging from 32.2 to 36.6 percent) were taught personal finance in high school. This indicates that personal finance likely is not taught unless it is somehow prescribed in the standards. Most students within all categories (89.3 to 92 percent) were not exposed to personal finance information in their communities.

Positive Behavior Links

Positive behaviors reported in the study regarding budgeting, saving, and use of credit include:

- Roughly half of all students reported saving on a regular basis (49.9 percent for students from states in the No Standards category and more than half of students from states in all other categories).
- Although more than half of the students weren't budgeting, most students (39.7 to 46.1 percent) within all policy categories who were budgeting reported that they had been using a budget for at least six months.
- Most students within all policy categories did not have any risky credit behaviors, such as maxing out a credit card, making late payments, or not paying off the balance in full each month. A majority of students (62 percent) claimed to pay credit card bills in full each month, and the vast majority of students reported never missing credit card payments.



Significant Influences

Analysis of the data shows that the primary influences on financial behaviors include policy category, financial dispositions, and financial knowledge. The Standards Only policy category was predictive of both high performance on the knowledge assessment and higher levels of self-reported knowledge.

In particular, having standards was a key tipping point for financial knowledge. Students from states in the Course and Assessment Required category had higher levels of self-reported knowledge than students from states in the No Standards category. In addition, students from states with Standards Only had greater knowledge than students from states with No Standards. Thus, the remaining states without policies should clearly consider adopting standards at a minimum.

Overall, this study shows that financial behaviors of college students vary by state policy on financial education, even when controlling for demographics, financial resources, financial education, financial knowledge, financial social learning opportunities, and financial disposition. Compared to having No Standards, having Standards Only was significantly related to a greater likelihood that a student was using a budget and avoiding risky credit behavior. However, in the case of saving, only the Course Required category produced results that were statistically significant. Further, requiring a course was the only policy significantly related to all three financial behaviors: budgeting, saving, and credit usage. Thus, formal education plays a significant role in financial knowledge, which in turn affects financial behaviors.

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Role of Social Learning

The study notes that social and transactional learning contribute to students' financial experiences as well. Regardless of their education background in personal finance, students will be engaged in various necessary financial transactions during their college years. For example, many students will need checking accounts. Those without previous financial education on the topic will learn to use checking accounts through any combination of self-education, social learning, and/or trial and error (experiences).

Because these learning models exist outside formal financial education, the researchers caution that social learning and self-education by themselves may be problematic in that they could lead to false financial knowledge among young adults.

Links Between Policies and Study Factors

The effects of state policy category on financial dispositions, financial knowledge, and financial behaviors are summarized in Tables 3A, 3B, and 3C.

Table 3A: The Effect of State Policy Category on Financial Dispositions

	No Standards	Standards Only (with No Required Implementation)	Standards with Required Implementation	Course Required	Assessment Required	Course and Assessment Required	Comments
Financial Disposition	Materialism	Reference category	Not statistically significant	Not statistically significant	Not statistically significant	Not statistically significant	This likely was more attributable to socialization.
	Compulsive Buying	Reference category	Less prone to compulsive buying	Not statistically significant	Not statistically significant	Not statistically significant	This likely was more attributable to socialization.
	Self-Efficacy	Reference category	Higher levels of financial self-efficacy	Not statistically significant	Lower levels of financial self-efficacy	Lower levels of financial self-efficacy	Some education improved confidence; however too much may have been overwhelming and actually is less effective than lesser polices.
	Future Orientation	Reference category	Not statistically significant	Not statistically significant	Not statistically significant	Not statistically significant	Policy category was not a significant predictor of the future orientation of college students.
	Financial Risk Tolerance	Reference category	More likely to be willing to take average financial risk	More likely to be willing to take average financial risk	More likely not to be willing to take any financial risk	More likely to be willing to take average financial risk	Financial risk tolerance behaviors are defined as better understanding of the nature of risk and the need for assuming some risk to get ahead.

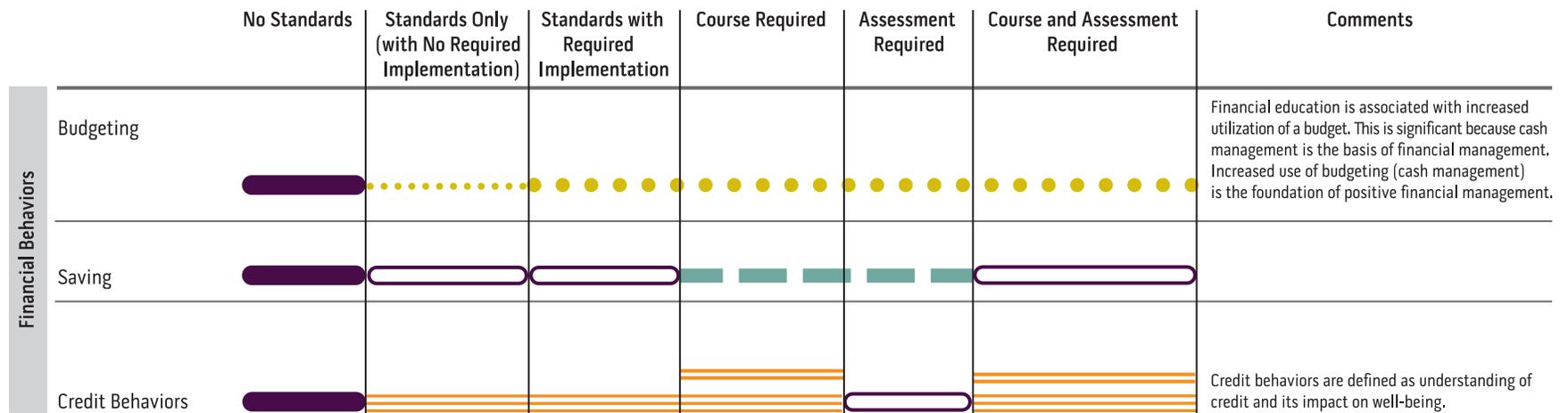


Table 3B: The Effect of State Policy Category on Financial Knowledge

	No Standards	Standards Only (with No Required Implementation)	Standards with Required Implementation	Course Required	Assessment Required	Course and Assessment Required	Comments
Financial Knowledge	Financial Quiz Scores						The lower quiz scores for participants where courses were required could be related to the material coverage versus the questions.
	Self-Reported Financial Knowledge						The more positive view of one's own knowledge is likely related to the greater confidence one has in his or her knowledge.
	Perceived Financial Knowledge Compared To Others As Better, Same, Or Worse						Policy category was not a significant factor.

-  Reference category
-  Not statistically significant
-  Higher financial quiz scores
-  Lower financial quiz scores
-  Higher self-reported financial knowledge

Table 3C: The Effect of State Policy Category on Financial Behaviors



In Tables 4A, 4B, and 4C, the first column at left lists the dependent variables. The first row across the top of each table lists the categories of predictors for each measure of financial capability. Tables 4A, 4B, and 4C describe significant demographic characteristics, financial characteristics, financial knowledge/education, and social learning opportunities that affect positive financial dispositions, financial knowledge, and financial behaviors. Significant financial dispositions that affect financial behaviors, such as materialism, compulsive buying, self-efficacy, future orientation, and risk tolerance, also are shown in Tables 4A, 4B, and 4C.

Table 4A: Significant Predictive Variables of Positive Financial Dispositions

	Demographic Characteristics	Financial Characteristics	Financial Knowledge/Education	Social Learning Opportunities	Comments	
Positive Financial Dispositions	Low Materialism	Older, white, graduate/professional/other students	Students with lower income (\$1–\$499) and students who had Federal Work-Study, scholarships, and tuition waivers	Students who had a personal finance course in their community	Discussing with parents and peers (–)	Discussing with parents and peers: Students may need more than discussions with families and friends. Community courses seem to be a useful tool.
	Low Compulsive Buying	White, male students	Students who had scholarships	Students who had a higher financial quiz score and higher self-reported financial knowledge	Students who observed their parents' financial behavior	Students who had discussed financial management with their parents or friends or who observed their friends' behavior were more prone to compulsive buying, indicating that students watch what parents DO not what they SAY . Another interesting finding was that students who were taught personal finance in high school were more prone to compulsive buying.
	High Self-Efficacy	White, male students	<ul style="list-style-type: none"> Students who had scholarships Students who were listed as dependents on their parents' tax return 	Students who had a higher score of self-reported financial knowledge and financial quiz	Discussions with parents (–); observing peers (–)	Better understanding of personal finances gave students greater confidence in their knowledge.
	High Future Orientation	Male, single students	Students with lower debt (\$1–\$999)	Quiz score (–); self reported (–)	Students who had discussed financial management with their parents and observed their friends' financial behavior	
	Financial Risk Tolerance	<ul style="list-style-type: none"> Male students have above average financial risk tolerance White students have average financial risk tolerance 	Needs-based assistance (–); scholarships (+) for average, (–) for above average	Students who had a personal finance course in high school had average financial risk tolerance	Students who had discussed financial management with their friends had above average financial risk tolerance	There were no correlates for low financial risk tolerance.

In Tables 4A and 4B, the predictors include: demographics, financial characteristics, financial education, and social learning opportunities. In Table 4C, predictors also include financial dispositions (note that financial dispositions were included only in the models of behaviors, but not in the models for dispositions and knowledge). A (+) or (-) following a characteristic indicates whether the dependent variable increased or decreased the likelihood of that measure of financial capability.

Table 4B: Significant Predictive Variables of Financial Knowledge

		Demographic Characteristics	Financial Characteristics	Financial Knowledge/Education	Social Learning Opportunities	Comments
Financial Knowledge	Higher Financial Quiz Scores	Older, white, male students (+); being single (-)	Greater income, greater debt, being a dependent on parents' taxes, having a scholarship	Students who had taken a personal finance course in their community	Students who had discussed financial management with their friends and observed their parents' financial behavior	Financial education improved knowledge.
	Higher Self-Reported Financial Knowledge	Older, white, male students (+); being single (-)	Greater income, being independent from parents, having less debt	Students who had taken a personal finance course at high school and in their community	Students who had discussed financial management with their parents and friends and observed their friends' financial behavior	Financial education improved knowledge.
	Perceived Financial Knowledge Compared to Others	Older, white, male, and married	Greater monthly income, less debt, needs-based assistance	Students who had taken a personal finance course at high school and in their community perceived their financial knowledge as better compared to others	<ul style="list-style-type: none"> ▪ Students who had discussed financial management with their parents and friends and observed their parents' financial behavior perceived their financial knowledge as better compared to others ▪ Students who had observed their friends' financial behavior perceived their financial knowledge the same as others 	There were no correlates for perceived knowledge being worse than others.

Table 4C: Significant Predictive Variables of Positive Financial Behaviors

	Demographic Characteristics	Financial Characteristics	Financial Knowledge/Education	Social Learning Opportunities	Financial Dispositions (only discussed in the context of Financial Behaviors)	Comments	
Financial Behaviors	Uses a Budget	Male, freshman more often to use budget than seniors	Federal student loan	<ul style="list-style-type: none"> Students who had a higher score of self-reported financial knowledge Students who perceived their financial knowledge as better than others Students who had taken a personal finance course at high school and in their community 	Students who had discussed financial management with their parents and friends	Students with higher levels of self-efficacy	Students with higher levels of financial knowledge, greater exposure to social learning opportunities, with confidence in their knowledge were more likely to be budgeting.
	Saves Regularly	Female, freshman, married	<ul style="list-style-type: none"> Students who had an increase of income or debt were more likely to save Students who received need-based financial aid were less likely to save 	<ul style="list-style-type: none"> Students who had a higher score of self-reported financial knowledge Students who perceived their financial knowledge as better than others Students who had taken a personal finance course in their community 	Students who had discussed financial management with their parents and friends	Students with higher levels of self-efficacy and who were less prone to compulsive buying	Students with higher levels of financial knowledge and greater exposure to social learning opportunities were less prone to frivolous spending, had more confidence, and were more likely to be saving.
	Positive Credit Behaviors	White and younger; males less likely to miss a payment, females less likely to max out	Decrease with income, being a dependent on parents (+)	Self-reported knowledge (-)	Students who had observed their parents' financial behavior were less likely to max out credit cards	<ul style="list-style-type: none"> Students who were less prone to compulsive buying also were: <ul style="list-style-type: none"> Less likely to max out credit cards More likely to pay credit card balances fully each month Students with higher levels of self-efficacy and who were future-oriented were more likely to pay credit cards balances fully each month 	There were no correlates for students who pay their credit cards on time.

As the study shows, financial education is a key predictor of financial knowledge—and financial knowledge is a key predictor of financial behavior. Because the Standards Only category was a key tipping point in the study's measures of financial knowledge, having state standards should be considered a minimum. The ideal situation is for states to be in the Course Required category because this factor had an even stronger impact on knowledge.

Implications for State Education Policymakers and Financial Educators

There is clear evidence that students from states with no financial education policies tend to fare worse on the majority of outcome measures (dispositions, knowledge, and behavior) than students from other states. The study found outcomes ranging from insignificant to significant among the remaining five policy categories with respect to positive financial behaviors, knowledge, and dispositions. Positive outcomes associated with state policies provide opportunities for policymakers to review and recommend enhancements to standards and mandates in their state.

It is clear from this study that having some standards with mandatory implementation or better is an important beginning and the majority of states have embraced this; all states should be encouraged to achieve this minimum. In addition, the possibility that financial education may need to compete with social

learning and personal experience points to the need for financial education to be an ongoing process beginning at earlier ages, before poor habits may take root. Formal financial education in schools should be a source of accurate, unbiased information on personal financial management issues. However, because social learning occurs at all ages, it may be important to include basic personal finance education standards for younger ages. Note: This study did not assess whether students had financial education prior to high school; however, the authors believe there are appropriate personal finance-oriented learning objectives for children of all ages, even as young as kindergarten age.

Formal education plays a significant role in financial knowledge, which in turn affects financial behavior.

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The full report is available at www.nefe.org/mandatesreport.

