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Which Students Are More Likely to Experience Financial Socialization Opportunities? Exploring the Relationship between Financial Behaviors and Financial Well-Being of College Students

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Abstract: This study explores the relationship between financial social learning opportunities and financial behaviors of college students. Data was collected from current college students age 18 and over throughout the United States during spring and fall of 2008. Results suggest important relationships exist among financial social learning opportunities, financial dispositions, and financial behaviors.

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Socialization is the process by which individuals acquire the knowledge, skills, and dispositions that enable them to participate more or less as effective members of groups and society (Brim, 1966; McNeal, 1987; Moschis, 1981). Socialization is often viewed as a social process by which norms, attitudes, motivations, and behaviors are transmitted from specific sources (commonly known as socialization agents) to the learner (Hira, 1997; McLeod, O'Keefe 1972). Socialization begins in childhood in our society and continues, to some extent, throughout life (McNeal, 1987; Moschis, 1985, 1987). Children who emulate their parents' behavior through observations provide a good example of social learning. The basis of social learning is that people can learn from others by observing and modeling their behavior, attitudes, and emotional reactions (Bandura, 1977). Bandura (1977) indicates that modeling can teach new behaviors by a faster and more efficient means and increase the frequency of similar behavior. Therefore, he suggests that parents and teachers must behave appropriately. Ward (1974) points out "socialization is a process by which young people acquire skills, knowledge, and attitudes relevant to their effective functioning as consumers in the marketplace." Some researchers have extended that definition to include acquiring and developing values, attitudes, norms, skills, behaviors, motives and knowledge which are related to consumption and family financial management (Rettig and Mortenson, 1986). However, financial socialization is much more inclusive than learning to effectively function in the marketplace. It is the process by which young people acquire and develop values, attitudes, standards, norms, knowledge, and behaviors that contribute to their financial skills and understanding (Cohen and Xiao, 1992; Danes, 1994; Fox, Bartholomae and Gutter, 2000; Hira, 1997).

Socialization processes include the collection of life events and personal interactions, giving children the opportunity to develop financial skills and knowledge (Fox, Bartholomae, and Gutter, 2000). According to social learning theory, spending behaviors can be transmitted by parents and other influential individuals and can be taught from generation to generation. During early childhood, humans are either successful or unsuccessful in learning to manage time, space, resources and impulses. It is reasonable to assume that spending patterns and expectations of the emotional results of spending are learned in childhood (Churchill and Moschis, 1979; Moschis and Moore, 1984; Valence, d'Astous and Fourtier, 1988). Ward (1974) suggests that at least some patterns of adult consumer behavior are influenced by childhood and adolescent experiences, and the study of these experiences should help us to understand not only consumer behavior among young people, but also the development of adult patterns of behavior as well. A study by Fox, Bartholomae, and Gutter (2000) indicates that individual, organizational, or institutional agents that children contact or relate to are the main sources of socialization opportunities.

Socialization opportunities come from individual, organizational, or institutional agents with whom children come into contact or maintain a relationship. The primary socialization agents that play a significant role in consumer socialization include parents, peers, schools, and mass media (Bush, Smith and Martin, 1999; Moschis and Moore, 1984). These agents influence the psychological, emotional, and behavioral development of young people as they become consumers in the marketplace (Moore, Raymond, Mittelstaedt and Tanner, 2002). As many empirical studies find, peers, school, family, and the media are typical sources of financial knowledge (Fox, Bartholomae and Gutter, 2000; Keller and Staelin, 1987; Lee and Hogarth, 1999).

The family is the primary socialization agent for children. Children learn financial knowledge through their observations and participation and through their parents' intentional instruction (Danes, 1994; Lyons, Scherpf and Roberts 2006; McNeal, 1987; Moschis, 1987). Parents appear to play an important role in the consumer socialization of their offspring, and they are instrumental in teaching them the rational aspects of consumption. In addition, youngsters appear to acquire a variety of other consumption related orientations and skills from their parents. Parental influence on the consumer behavior of their offspring is situation specific; it varies across products, stages in the decision making process, and consumer characteristics (Moschis, 1985).

Peers play a pivotal role in the socialization process from early childhood through adolescence (Moschis and Churchill, 1978; Ward, 1974). The relative influence of peers and parents varies depending on the area of adolescent concern (Kandel and Andrews, 1987). Peer influence focuses on lifestyle issues, whereas parental influences predominate on future life goals and aspirations (Davies and Kandel, 1981). The general finding is that parental influence decreases, and peer influence increases, with age, for a variety of purchase acts. Mass media influences are reported to be low and constant (Ward, 1974).

Research suggests that media exposure among today's youth has reached record levels (Siegel, Coffey and Livingston, 2001). Mass media, particularly television, is believed to be a critical socialization force in the consumer behavior development of children and adolescents. According to O'Guinn and Shrum (1997), television rivals many of the traditional socialization agents such as parents, schools, and religious groups. Schools and teachers "influence adolescents' social-emotional and behavioral development through organizational, social and instructional processes" (Eccles, 2004). Like parents, they also provide information about

consumption-related activities and contribute to the development of a child as a consumer (McNeal, 1999). Schools help to reinforce the rules or guidelines of acceptable behavior in the marketplace.

Today, for most young adults, college marks the beginning of greater financial independence from their parents and greater responsibility for making sound financial decisions (Lyons, Scherpf and Roberts 2006). College life today includes a new dimension of discovery for students' easy access to credit cards. As students step on campus for the first time, they are bombarded with credit offers via on-campus bulletin boards and tables set up in the union. It is common for students to obtain credit cards early within their college careers and remain loyal customers for up to 15 years (Hultgren, 1998). Once at college, many students are dealing with financial challenges such as paying bills, creating a budget, and using credit for the first time in their lives. The ability of students to cope with these challenges depends critically on the financial knowledge and behaviors they acquired prior to being on their own (Lyons, Scherpf and Roberts 2006). The current movement among legislators, family and consumer science professionals, and higher education institutions focuses on how to educate society's young people about wise credit use habits (Hayhoe, 2002; Stern, 2002). Perhaps the first question to be considered is how these habits are formed. Specifically, how do college students acquire the skills to manage their credit responsibly (Hultgren, 1998)? This study explores the connection between financial social learning opportunities and financial behaviors of college students, which would help to further understand their financial behavior. This study is part of a project graciously funded by the National Endowment for Financial Education.

Previous Research

Several previous studies have revealed that parents' intentional instruction and reinforcing activities can directly and indirectly impact their children's financial knowledge and behavior (Drentea and Lavrakas, 2000; Hayhoe, Leach, Turner, Bruin and Lawrence, 2000; Lyons, Scherpf and Roberts 2006; Moschis, 1985). In addition, Marshall and Magruder (1960) have found that parents' wise financial management can increase children's knowledge about money. Bernheim, Garrett and Maki (2001) found that people, who, as children, have been encouraged to save using a bank account, save more than others in their adult life. Similarly, those who characterized their parents as having saved more than average saved more than others. Alhabeeb (1999) points out that the influence of each socialization agent (family, school, media, or peer group) is determined by the extent to which the child is exposed to each. John (1999) gives a warning for parents to start early by pointing out that although parents are more influential at the information-gathering stage, peers become more influential at the product evaluation stage. Increased peer influence might be because youth spend more time with peers as they get older, thus being influenced more by this environment (Harris, 1995). Brown, Mounts, Lamborn and Steinberg (1993) found that parents do not lose their influence as more time is spent with peers but that parents retain indirect influence over their child's peers. John (1999) states materialistic attitudes are positively related to susceptibility to peer group influences, influenced by weak family communication and unstable family environments. Therefore, the positive financial communication that happens in the home, especially by parents, will affect how influential peers will be on their children.

Hira (1997) indicates that among the various socialization agents, family in general, and mothers and fathers in particular, are identified as the most important sources of influence on

respondents' financial attitudes and beliefs. The results suggest that younger people learn the symbolic meaning of money from their families. Money values are passed down from parents to children through direct and indirect messages. The proportion of those who indicate parents or a family member as the strong influence is higher among younger respondents. Friends are an important source of influence, but only among the younger age groups, and a larger proportion of the students report that money is discussed in their households. According to Capital One Financial Corporation's third annual back-to-school survey, "87% of college students and 90% of high school students rely on their parents for financial advice" ("College, High School Students Need Better Financial Education," 2003). Pinto, Parente and Mansfield (2005) indicate that college students learn more information about credit cards from their parents than any other socialization agent (peers, media, schools). Parents are the only socialization agent to be significantly correlated with credit card use. The more information received from parents about the proper use and misuse of credit cards, the lower the students' outstanding credit card balances. Lyons (2003) found that about 68% of students reported actually receiving financial information from their parents. Webley and Nyhus' (2006) results show that parental behavior (such as discussing financial matters with children) and parental orientations (conscientiousness, future orientation) have a weak but clear impact on children's economic behavior as well as on economic behavior in adulthood. Other studies also show that future orientation or time horizon is important for economic behavior (Julander, 1975; Lea, Webley and Walker, 1995; Webley and Nyhus, 2001).

There are clearly multiple sources of influence on the child's ability to delay gratification and children learn in a variety of ways, through guidance from parents, explicit educational programs and by observing role models. In addition, the dispositions of children themselves play

a role: parents and teachers adjust their behavior in the light of the way particular children react (Webley and Nyhus, 2006).

Research Question and Hypothesis

The purpose of this study is to examine the relationship between financial social learning opportunities and financial behaviors of college students focusing on three financial behaviors: checking a credit report, using a budget, and saving. Thus, several guiding research questions are evident; first, what are the college students' profiles of financial social learning sources, financial disposition, and financial behaviors? Second, do the profiles of financial social learning opportunities, financial disposition, and financial behaviors differ by the demographic characteristics? Finally, what are the relationships among financial social learning opportunities, financial disposition and financial behaviors?

Hypotheses

1. Financial disposition variables impact financial behavior.
2. Financial social learning opportunities such as social learning sources and social learning behavior should influence financial disposition.
3. Financial social learning opportunities should have a direct impact on financial behavior.
4. Demographic variables such as age, gender, marital status, race, school rank, and student status should have a significant impact on social learning opportunities.
5. Financial variables such as income, dependent on parents' tax return, financial aid, and student loans should have an impact on social financial learning opportunities.

Method

Data

The ideal population for this in terms of importance and access is college students from the United States. Thus, data was collected during spring and fall of 2008 using a web survey of college students throughout the United States. This study uses a stratified sampling technique. The 50 states and the District of Columbia were divided into 6 categories of mandate policies based on the 2004 National Council on Economic Education report. Then using random numbers, states were selected from each of the categories with the target campuses being large state universities. Random lists of student email addresses were obtained for each campus (in some instances, entire student populations were made available). The sample was limited to currently enrolled college students age 18 and over. Students were emailed three times over a course of one month requesting their participation; 172,412 emails were sent with about 16,876 starting the survey. The average age of the students was 21.3, and almost all students were full-time (93.4%). About two-thirds (64.4%) were female, 80.6 % white, 84.8% single, and 27.0% senior class-rank.

Procedure

Student participation was requested using emails delivered to their email addresses of record. Students were informed that every one thousandth completed survey would receive a \$100 gift card. The email students received, which contained an informed consent document, took them to the survey, where they had to affirm their assent to the informed consent statement prior to beginning the study.

Measurement of Variables

- Demographic variables: The study involved college students' demographic variables: age, gender, race, school rank, marital status, and student status.
- Financial variables: financial variables were measured using monthly income, dependent on parents tax return, financial aid, and amount of student loans.
- Financial Behaviors: This includes budgeting, checking credit reports, and saving. Budgeting is measured with the question, "Do you currently use a system to manage expenses and avoid overspending?" Responses included yes or no. Checking credit reports is measured with the question, "Have you checked your credit report at least once within the last year?" Responses include yes and no. Saving is measured with the question, "Are you currently depositing/investing money on a regular basis into some sort of account (includes employer plans, mutual funds, individual retirement account (IRA), savings, CDs)?" Responses include yes or no.

Financial Dispositions:

- Materialism: The Materialism Scale (Richins & Dawson, 1992) examines three factors related to materialism: centrality, happiness, and success. The 18-item scale is scored on a 5-point range from 1 (strongly agree) to 5 (strongly disagree). A participant can score from 15 to 75 on the scale. Lower scores reflect lower levels of materialism and higher scores reflect higher levels of materialism.
- Compulsive buying: The Compulsive Buying Scale (CBS), developed by Faber and O'Guinn (1992), is a screening instrument utilized to identify compulsive buyers. The CBS consists of statements representing specific behaviors and feelings related to compulsive buying. Six of the statements (e.g., "Felt others would be horrified if they

knew of my spending habits,” “Bought myself something in order to make myself feel better,” “Felt anxious or nervous on days I didn’t go shopping”) are rated on a scale from 1=very often to 5=never. More severe compulsive buying will result in a larger negative number on the scale.

- Self-efficacy: Financial self efficacy is measured by the statements: “I am good at managing my money,” “I am satisfied with my ability to manage my money,” “Compared to other people, I think I do pretty well at making financial decisions,” “I am pretty skilled at making financial decisions,” “I budget my money very well,” and “I use my money very carefully.” Students answered by using a 7-point scale where 1 means strongly disagree and 7 means strongly agree.
- Consideration of Future Consequences (CFC): Future orientation was measured by Strathman, Gleicher, Boninger and Edwards’s (1994) “Consideration of Future Consequences” scale. This is a measure of the extent to which people consider distant versus immediate consequences of possible behaviors. The scale has 12 items. Respondents indicate the extent to which each statement describes them on a 5 point scale, from 1 (doesn’t describe me at all) to 5 (describes me very well).
- Willingness to take risks: Willingness to take risks is measured with the question, “Which of the statements on this page comes closest to the amount of financial risk that you are willing to take when you save or make investments? Responses include: “Take substantial financial risks expecting to earn substantial returns,” “Take above average financial risks expecting to earn above average returns,” “Take average financial risks expecting to earn average returns,” and “Not willing to take any financial risks.”

Financial Social Learning Opportunities:

- **Social Learning Source:** Students are asked how frequently in the past five year their parents and friends or other students had done the following: manage expenses and avoid overspending, check credit report, pay bills on time, save and invest, work with a mainstream financial institution, buy and maintain health insurance, auto insurance and renters insurance. The student answered by using a 5 point scale from “never” to “often.”
- **Social Learning Behavior:** Students are asked how frequently in the past five years they observed their parents/caregivers and friends or other students involved in the following: manage expenses and avoid overspending, check credit report, pay bills on time, save and invest, work with a mainstream financial institution, buy and maintain health insurance, auto insurance and renters insurance. The student answered by using a 5 point scale from “never” to “often.”

Analyses:

The hypotheses were tested in the following manner. The first hypothesis is to confirm some existing relationships among financial disposition and financial behavior. The first hypothesis is examined by a *t* test for materialism, compulsive buying, financial self efficacy and future orientation. Cross-tabulations with a chi-square test were used to test the relationship between willingness to take financial risks and financial behavior. The second hypothesis proposes the relationship between financial social learning opportunities and financial disposition, including materialism, compulsive buying, financial self efficacy, future orientation and risk tolerance. This relationship is tested with a Pearson correlation and a test confirming the correlation is different than zero. One-way ANOVA was used to assess the relationship between

willingness to take financial risks and financial social learning. The third hypothesis assesses the relationship of financial behavior on financial social learning opportunities. This hypothesis is assessed using a t test. The fourth and fifth hypotheses are to confirm some existing relationships among demographic and financial variables and financial social learning opportunities. Ordinary Least Squares (OLS) Regression Analysis is computed to determine the interrelationships between demographic and financial variables and financial social learning opportunities. In the regression equation, demographic variables are listed first, followed by financial variables. These results are presented in Tables 1- 6.

Findings

Financial Dispositions and Financial Behaviors

The first hypothesis test explores whether the average area-specific (budgeting, checking credit report, saving) behavior for students differed by financial dispositions, including materialism, compulsive buying, financial self efficacy and future orientation scales. Students who budget tend to have lower scores on materialism, compulsive buying, and future orientation scales than those who do not budget. However, students who budget have a higher financial self efficacy score than students who do not budget. The difference between the means is found to be significant at the level of $\alpha = 0.01$. This would indicate that students who budget tend to be less materialistic, less likely to engage in compulsive buying, but also have a more present orientation. These students also tend to have a higher level of financial self efficacy, perhaps linked in some way to budgeting successes.

There are significant differences in compulsive buying and future orientation by whether students checked their credit report. Students who check their credit report have a lower compulsive buying score than those who do not. Students who check their credit report have a

lower future orientation score than those who do not ($p < .001$). However, there are no differences regarding materialism and financial self efficacy by whether a student checks his or her credit report.

There is a significant relationship between materialism, compulsive buying, financial self efficacy, future orientation and saving ($p < .001$). Students who save have lower scores on the materialism and future orientation scales. Those who save tend to be less materialistic and, interestingly enough, more present oriented. However, students who save have higher scores on the compulsive buying and financial self efficacy scales. These results would suggest that while students who save may be more likely to engage in compulsive buying, they still tend to have higher levels of financial self-efficacy, possibly related to the accumulation of assets.

TABLE 1
Comparison of Means Financial Disposition Scales Scores by Financial Behaviors

Financial Disposition	Financial Behaviors	Mean	SD	T
Use Budgeting				
Materialism	No	43.51	5.86	5.228***
	Yes	42.92	5.80	
Compulsive Buying	No	23.88	4.25	-15.798***
	Yes	25.08	3.57	
Financial Self Efficacy	No	28.40	8.27	-18.563***
	Yes	32.78	7.12	
Future Orientation	No	22.80	1.88	10.746***
	Yes	22.40	2.08	
Checking Credit Report				
Materialism	No	43.26	5.73	.985
	Yes	43.14	6.08	
Compulsive Buying	No	24.76	3.80	11.655***
	Yes	23.80	4.27	
Financial Self Efficacy	No	30.74	7.89	.558
	Yes	30.60	8.23	
Future Orientation	No	22.66	1.96	4.126***
	Yes	22.49	2.03	
Saving				
Materialism	No	43.56	5.93	5.568***
	Yes	42.93	5.73	
Compulsive Buying	No	23.71	4.25	-19.192***
	Yes	25.17	3.57	
Financial Self Efficacy	No	29.00	8.08	-13.194***
	Yes	32.18	7.62	
Future Orientation	No	22.74	1.93	6.867***
	Yes	22.48	2.03	

* $p < .05$, ** $p < .01$, *** $p < .001$

The chi-square test result indicates that there is significant difference between level of risk tolerance and financial behaviors. Students who budget and save have the highest percentage of average risk tolerance within all of the financial behaviors. Students who do not check their credit reports also have high percentages of average risk tolerance ($p < .01$, .001).

TABLE 2
Willingness to Take Financial Risk by Financial Behaviors

Willingness to Take Financial Risk	Financial Behaviors								
	Use Budget			Check Credit Report			Saving		
	No %	Yes %	Total %	No %	Yes %	Total %	No %	Yes %	Total %
No risk	17.6	15.7	16.7	18.2	13.2	16.6	19.4	14.1	16.6
Average risk	56.8	58.3	57.6	59.2	53.9	57.6	56.2	58.8	57.6
Above avg risk	21.5	22.6	22.0	19.4	28.1	22.1	20.7	23.3	22.1
Substantial risk	4.0	3.3	3.7	3.2	4.8	3.7	3.7	3.8	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	$\chi^2=12.169,df=3,p<.01$			$\chi^2=1.387E2,df=3,p<.001$			$\chi^2=56.109,df=3,p<.001$		

Social Learning and Financial Dispositions

The second hypothesis explores whether there are differences in financial dispositions related to social learning. The financial social learning opportunities composite score consists of responses to eight items. These items include social learning sources (discuss finances with parents and friends) and social learning behaviors (observing parents' and friends' financial behavior). Scores range for each dimension from 8 to 40. The average "discuss finances with parent" score for students is 21.84 ($SD=7.88$), "discuss finances with friends" score is 17.12 ($SD=6.76$), "observing parents' financial behavior" score is 26.88 ($SD=8.82$), and "observing friends' financial behavior" is 17.30 ($SD= 7.28$). The patterns of correlation vary between social learning opportunities and financial dispositions.

Materialism is significantly correlated with all four elements of the social learning opportunities measure. Overall materialism is positively correlated with all measures of social learning opportunities. Note social learning need not have been positive messages, but could have been poor behaviors, too. Thus, if parents or peers are materialistic, this likely led to this being a learned disposition.

Compulsive buying is significantly correlated with financial discussions with friends, observing parents and observing friends measures. Overall compulsive buying is positively

correlated with frequency of social learning through observing parents. However, financial discussions with friends and social learning through observing parents and friends are negatively correlated with the compulsive buying score. This would suggest that if friends are compulsive buying, one would be less likely to do this.

Similar to materialism, financial self efficacy is also significantly correlated with all four elements of the social learning opportunities score. Overall, financial self efficacy is positively correlated with all measures of social learning opportunities. Thus, students tend to have greater belief in the potential success of their financial management if they discuss with or observe financial behaviors of parents and close friends.

One interesting result is that future orientation does not correlate with any of the four elements of the social learning opportunities measure. However, there is a significant relationship between financial risk tolerance and all four elements of social learning opportunities. However, the actual differences are slight. In general, students with greater exposure to financial social learning opportunities through discussions tend to have higher levels of risk tolerance than those with fewer opportunities. The differences when examining opportunities through observing behavior are negligible regardless of whether it was observing parents or close friends.

These results suggest a possible link between social learning opportunities and financial dispositions. The lack of relationship with future orientation may imply that other forces may shape future orientation.

TABLE 3

Correlations between Financial Social Learning Opportunities and Financial Dispositions.

Financial Social Learning Opportunities	Financial Dispositions			
	Materialism	Compulsive Buying	Financial Self Efficacy	Future Orientation
Discuss with Parents	.042**	.006	.132**	.014
Discuss with Friends	.051**	-.119	.062**	-.011
Observing Parents	.028**	.080**	.134**	.000
Observing Friends	.045	-.096**	.031**	.012

* $p < .05$, ** $p < .01$, *** $p < .001$

TABLE 4

Comparison of Means Financial Social Learning Opportunities Scales by Willingness to Take Financial Risk

Willingness to Take Financial Risk	Discuss with Parents		Discuss with Friends		Observing Parents		Observing Friends	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
No risk	20.88	7.95	16.39	6.68	26.12	9.17	16.65	7.35
Average risk	21.80	7.53	17.08	6.36	27.00	8.34	17.43	6.92
Above average risk	22.22	8.13	17.97	7.06	26.75	8.87	17.85	7.22
Substantial risk	22.19	8.88	18.11	7.83	26.31	9.50	17.55	7.84
Total	21.76	7.80	17.20	6.66	26.77	8.66	17.40	7.10
	$F=11.601, p<.001$		$F=24.328, p<.001$		$F=5.671, p<.001$		$F=10.625, p<.001$	

Social Learning and Financial Behaviors

The third hypothesis test explores whether the average area-specific behavior (budgeting, checking credit report, saving) of students differs by financial social learning opportunities, including financial discussions with parents, financial discussions with friends, observing parents and observing friends scales. Students who budget, check their credit report and save tend to have higher scores on all four elements of the social learning opportunities scales than those who do not budget, check their credit report and save. The difference between the means was found to be significant at the level of $\alpha = 0.01$. This result would suggest that students who budget, check their credit report and save are more likely to have engaged in or be engaging in financial discussions with parents and peers. The same is true of observing financial habits of parents and

peers. Thus, there appears to be a clear link between social learning opportunities and financial behaviors.

TABLE 5
Comparison of Means Financial Social Learning Opportunities Scales by Financial Behaviors

Financial Social Learning Opportunities	Financial Behaviors	Mean	SD	T
	Use Budgeting			
Discuss with Parents	No	20.79	7.44	-13.229***
	Yes	22.77	7.99	
Discuss with Friends	No	16.55	6.28	-11.044***
	Yes	17.95	6.88	
Observing Parents	No	26.03	8.55	-9.339***
	Yes	27.60	8.69	
Observing Friends	No	16.91	6.83	-7.566***
	Yes	17.94	7.27	
	Checking Credit Report			
Discuss with parents	No	21.53	7.40	-4.446***
	Yes	22.25	8.53	
Discuss with friends	No	16.49	6.14	-17.741***
	Yes	18.91	7.29	
Observing Parents	No	27.00	8.20	3.897***
	Yes	26.30	9.48	
Observing Friends	No	17.05	6.79	-7.956***
	Yes	18.23	7.60	
	Saving			
Discuss with Parents	No	20.92	7.49	-10.666***
	Yes	22.52	7.93	
Discuss with Friends	No	16.72	6.42	-7.657***
	Yes	17.70	6.75	
Observing Parents	No	26.05	8.63	-8.786***
	Yes	27.51	8.58	
Observing Friends	No	17.05	6.97	-5.107***
	Yes	17.75	7.13	

* $p < .05$, ** $p < .01$, *** $p < .001$

Determinants of Financial Social Learning

This section continues the development of our understanding about financial social learning opportunities by exploring what factors are known to be associated with a specific element of social learning (parent/peer, observation/discussion), thus addressing the last two hypotheses. OLS regression analysis is used to examine contributions of demographic and

financial variables to the level of social learning opportunities a student has had. OLS regression results are presented in Table 6. The overall model tests show the models to be reasonable. As seen in the table, the model of the OLS regression analysis with the outcome variable of “discuss finances with parents” ($F=27.600, p<.001$), “discuss finance with friends” ($F=31.319, p<.001$), “observing parents” ($F=64.476, p<.001$), and “observing friends” ($F=18.017, p<.001$) is significant.

There is strong support for the fourth hypothesis. The fourth hypothesis proposes that demographic characteristics should be associated with social learning opportunities. Based on adjusted regression coefficients, among the demographic variables age, gender, race, school rank senior and graduate/professional were all significant determinants of the level of student discussion about finances with their parents. Senior and graduate/professional students are more likely than others; older, male, white students were less likely than younger, female and other ethnicity to discuss personal finances with their parents. When looking at discussions with friends, gender, race, marital status and school rank are all significant determinants. Sophomore, junior, senior, graduate/professional, and other students are more likely than others; male, white, single students are less likely than female, other ethnicity, and married students to discuss personal finances with their friends. Similar patterns continue in looking at observations. Factors significantly related to observing financial behaviors of parents include age, gender, and marital status. Single students are more likely than married; older and male students were less likely than younger and female students to observe financial behaviors of their parents. Lastly, factors significantly related to observing financial behaviors of friends include gender, race, marital status, and school rank. Single, sophomore, junior, senior, graduate/professional and other

students are more likely than married and freshman; males and white students are less likely than female and other ethnicity to observe financial behaviors of friends.

There is strong support for the fifth hypothesis; this proposes that financial characteristics would be associated with social learning opportunities. Among the financial variables, “income level of \$500-\$999,” “dependent on parent tax return,” “need based financial aid,” “level of student loans from \$10,000-\$19,999,” “student loan levels of \$20,000 or more,” and “students not sure of student loan levels” are the variables making the most parsimonious prediction of scores on discussing finances with their parents. Students who have between \$500 and \$999 in income and those listed as dependent on their parents’ tax return are more likely than those in all other income brackets, including no income, and those listed independent from parents’ tax return, to discuss personal finances with their parents. Students who have need based financial aid, higher loans, and those not sure about loan amounts are less likely than others to discuss personal finances with their parents. In exploring factors related to social learning opportunities through discussions with friends, significant factors are income, dependency on parents, being eligible for federal work study, being eligible for need based aid, and students not sure about loan amounts. Students in any income group and those with need based aid are more likely than those with no income, other financial aid, or no financial aid to discuss personal finances with their friends.

Similar patterns are seen in exploring social learning opportunities through observation of financial behaviors. Factors related to observation of financial behaviors of parents include dependency on parents, receiving need based aid, and having student loans. Students who are listed as dependent on their parents’ tax return or have Stafford aid are more likely than those listed as independent from their parents’ tax return, those with other financial aid, and those with

no financial aid to observe their parents' financial behaviors. Students who have need based aid, all levels of student loans, and those not sure about levels of loans are less likely than others to observe their parents financial behaviors. Finally, factors related to social learning opportunities through observation of friends behaviors include income, receiving federal work study, receiving a scholarship, and students not sure about loan amounts. Students who have any income category and/or scholarships are more likely than those with no income and other financial aid or no financial aid to observe their friends' financial behaviors. Students who have federal work study and those not sure about loan amounts are less likely than others to observe their friends' financial behaviors.

TABLE 6

Ordinary Least Squares Regression Result for Financial Social Learning Opportunities

	Discuss with Parents			Discuss with Friends			Observing Parents			Observing Friends		
	<i>B</i>	<i>SD</i>	β	<i>B</i>	<i>SD</i>	β	<i>B</i>	<i>SD</i>	β	<i>B</i>	<i>SD</i>	β
(Constant)	28.733	.646		17.129	.551		33.225	.711		15.751	.606	
<i>Demographic variables</i>												
Age	-.399	.021	-.183***	.005	.018	.003	-.354	.023	-.172***	-.031	.019	-.018
Male	-.303	.135	-.018*	-.623	.115	-.044***	-1.734	.150	-.093***	-1.185	.128	-.077***
White	-.554	.165	-.027***	-1.234	.141	-.071***	.108	.183	.005	-.310	.156	-.017*
Single	.357	.205	.016	-.599	.176	-.032***	1.046	.227	.043***	.512	.194	.025**
Sophomore	.064	.103	.006	.382	.088	.044***	.026	.114	.002	.538	.097	.058***
Junior	.096	.068	.016	.403	.058	.077***	.030	.075	.004	.545	.064	.096***
Senior	.204	.053	.046***	.505	.045	.133***	.048	.058	.010	.573	.050	.141***
Graduate	.334	.069	.058***	.241	.059	.049***	.101	.076	.016	.592	.065	.112***
Other	.116	.159	.006	.324	.138	.019*	.306	.171	.015	.352	.146	.020*
Full-time student	.270	.288	.008	.211	.246	.008	.163	.318	.004	.428	.271	.014
<i>Financial Variables</i>												
Income \$1-\$499	.144	.155	.009	.538	.132	.038***	.061	.171	.003	.518	.146	.034***
Income \$500-\$999	.624	.200	.029**	1.463	.171	.078***	.318	.221	.013	.904	.189	.045***
Income \$1000 or more	.090	.277	.003	1.596	.237	.072***	-.497	.306	-.017	1.015	.262	.043***
Dependent on parents tax return	.498	.159	.029**	-.322	.136	-.022*	1.854	.176	.098***	.230	.150	.015
Stafford	.229	.238	.014	-.014	.204	-.001	.525	.264	.030*	.164	.226	.011
Federal work	-.058	.250	-.002	-.594	.214	-.024**	-.385	.277	-.012	-.901	.236	-.034***
Need based	-.701	.174	-.037***	.335	.148	.021*	-1.648	.192	-.077***	.101	.164	.006
Scholarship	-.206	.132	-.013	-.182	.113	-.013	.246	.146	.014	.252	.125	.017*
Tuition waiver	-.062	.292	-.002	.429	.249	.015	-.003	.324	.000	.145	.276	.005
Loans \$1-\$4999	-.392	.278	-.015	.079	.237	.004	-.934	.308	-.033**	-.120	.263	-.005
Loans \$5000-\$9999	-.435	.292	-.017	.091	.250	.004	-1.088	.323	-.039***	-.274	.276	-.012
Loans \$10,000-\$19,999	-.809	.294	-.033**	.238	.251	.011	-1.112	.324	-.041***	-.407	.278	-.018
Loans \$20,000 or more	-1.262	.301	-.052***	.347	.257	.017	-1.791	.333	-.066***	-.227	.285	-.010
Not sure	-1.803	.338	-.052***	-1.605	.287	-.054***	-2.287	.373	-.059***	-1.714	.319	-.053***
	<i>F</i> =27.600*** <i>R</i> =.21			<i>F</i> =31.319*** <i>R</i> =.22			<i>F</i> =64.476*** <i>R</i> =.31			<i>F</i> =18.017*** <i>R</i> =.17		
	<i>AR</i> ² =.041***			<i>AR</i> ² =.046***			<i>AR</i> ² =.095***			<i>AR</i> ² =.027***		
	* <i>p</i> <.05,			<i>p</i>			<.01,			*** <i>p</i> <.001		

Conclusions and Implications

This study focuses on the relationships among college students' demographic characteristics, financial resources, financial dispositions, and financial social learning opportunities. It uses data from a web survey collected during 2008 from college campuses across the United States to explore these relationships. Bivariate relationships were proposed and explored using mean-comparison techniques and cross tabulations. Finally, four regressions were used to identify the relationship of demographics, financial characteristics, and financial dispositions had with financial social learning opportunities. The results of this study provide several key conclusions.

First, financial dispositions are linked to financial behaviors. One important relationship is that students engaged in budgeting tended to have higher levels of financial self-efficacy. Second, financial dispositions are significantly related to financial social learning opportunities. Third, financial social learning opportunities are significantly related to financial behaviors. Finally, when controlling for other factors, social learning opportunities tend to be related to several factors. Age, gender, race, marital status, income level, dependence of parents, and qualification for needs-based financial aid are all significantly related to at least one of the four major subsets of social learning opportunities. There is growing evidence that financial socialization may play an important role in shaping our attitudes about personal financial management issues as well as the behaviors themselves. The results of this study provide some evidence as to these relationships. Several implications arise for various stakeholders.

Financial education related outreach aimed at improving youth and emerging adults' financial management beliefs, attitudes, preferences, or behavior may need to incorporate some element of modeling. This could include media based examples or messages. It could also

include interaction with the participant's own family. It may also suggest that working in cohorts or in existing peer groups may also be useful since close friends are an important source of social learning, along with parents. Both should be considered in planning financial education programming.

Researchers studying financial education effectiveness need to consider the role social learning may play as a mitigating factor in the influence of formal financial education. Social learning opportunities are related to both financial dispositions and behaviors. Thus, in studying either of those two issues, researchers should consider whether social learning related issues may confound their research. An implication for states contemplating financial education may be the issue that there will also be a need to engage families at a grassroots level. Additional support and cooperation should be suggested among various state agencies to provide opportunities, especially for youth, to be exposed to positive financial management behaviors and information.

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Appendix A: Variable Coding

Variables

Demographic Variables

Male	=1 if student is male, 0 otherwise
White	=1 if student is white, 0 otherwise
Sophomore	=1 if student is sophomore, 0 otherwise
Junior	=1 if student is junior, 0 otherwise
Senior	=1 if student is senior, 0 otherwise
Graduate	=1 if student is graduate, 0 otherwise
Other class	=1 if student is other class, 0 otherwise
Single	=1 if student is single, 0 otherwise
Full-time students	=1 if student is full-time, 0 otherwise

Financial Variables

\$1-\$499 income	=1 if student is \$1-\$499 income, 0 otherwise
\$500-\$999 income	=1 if student is \$500-\$999 income, 0 otherwise
\$1000 or more	=1 if student is \$1000 or more income, 0 otherwise
Dependent on parents' tax return	=1 if student dependent on parents' tax return, 0 otherwise
Stafford	=1 if student has Stafford financial aid, 0 otherwise
Federal work-study	=1 if student has federal work financial aid, 0 otherwise
Need based	=1 if student has need based financial aid, 0 otherwise
Scholarships	=1 if student has scholarship financial aid, 0 otherwise
Tuition waiver	=1 if student has tuition waiver financial aid, 0 otherwise
\$1-\$4999 loans	=1 if student has \$1-\$4999 loans, 0 otherwise
\$5000-\$9999 loans	=1 if student has \$5000-\$9999 loans, 0 otherwise
\$10,000-\$19,999 loans	=1 if student has \$10,000-\$19,999 loans, 0 otherwise
\$20,000 or more loans	=1 if student has \$20,000 or more loans, 0 otherwise
Not sure about loans amount	=1 if student not sure about loans amount, 0 otherwise
