

## **Prospective Teachers' Financial Knowledge and Teaching Self-Efficacy**

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*This study explored the financial knowledge and self-efficacy of prospective teachers toward teaching basic concepts in personal finance. The financial knowledge level of 99 prospective teachers was found to be that of the average U.S. consumer. Older prospective teachers ( $\geq 26$  years) were significantly more knowledgeable about savings than younger ones ( $\leq 25$  years). Also, prospective teachers who had never married were less knowledgeable about savings than those who were married, divorced or widowed ( $x = 67.50$ ,  $x = 80.77$ , respectively;  $f = 6.63$ ,  $p \leq .05$ ). Prospective teachers were least knowledgeable about credit, yet felt most efficacious towards teaching credit; similarly, they felt least capable of teaching about mortgages, yet their knowledge scores for mortgages were among the highest.*

As spending increases among school-aged individuals, so does the need for individuals, teachers, and programs that will provide students with the knowledge, skills, and abilities needed to make rational consumer decisions. Improving students' understanding of personal finance is not just a goal of educators; it has become a major issue of parents, community groups, businesses, government agencies, organizations, and policy makers. Inasmuch as the average score of high school seniors on basic financial facts being a mere 52% (Gandel, 2006) and billions of dollars are spent yearly by children under the age of 18 (Schor, 2004), it is no surprise that the financial education of students has become a national issue.

The increased interest in the financial education of school-aged individuals has prompted schools nationwide to start preparing students to become well-informed, financially literate individuals who are capable of making rational consumer decisions. In response to this, programs and curriculums such as *Planet Orange* (ING.Direct, 2007), *NEFE High School Financial Planning Program* (National Endowment for Foundation of Education, 2007), *Jump\$tart Personal Finance* (JumpStart, 2007), and others have been developed.

Most importantly, increased financial knowledge is seen as benefiting students in helping them identify, plan, and achieve financial goals now and in the future. While improving the financial knowledge of students tends to dominate much of today's thinking, enhancing teachers' financial knowledge and skills is very essential in helping to increase students' financial knowledge. Teachers of all grade levels have an important role to play in equipping students with the knowledge, skills, and abilities needed to increase their economic security and well-being.

However, in order for any teacher to perform this role, he or she must have the financial knowledge, skills, and abilities required. Teachers competent in the area of personal finance are the agents that will provoke significant change or action in accomplishing this national as well as state and local goal. With children having such a large impact on the marketplace, it is essential that all teachers are prepared academically to take on the challenge of preparing all students to make informed, intelligent decisions regarding finances.

The premise of this study is that prospective teachers' ability to effectively facilitate the increase in students' financial knowledge depends, to a great extent, on their level of financial knowledge. Because financial knowledge and self-efficacy can be increased, assessing prospective teachers' financial knowledge and self-efficacy towards teaching basic principles of

finance is important. Data from such assessments can be used to create intervention measures that can assist in changing teachers' attitudes, knowledge, and skills for working with students in financial management.

In addition, an awareness of prospective teachers' financial knowledge together with their teaching self-efficacy could make important contributions to improving teacher education programs. Improvements made in teacher education programs relative to personal finance also suggest improving the educational status of all students, which could as well lead to an increase in national financial literacy.

## **Background**

### ***Financial Knowledge of College Students***

Financial literacy, as defined by Garmen (2006) is ones' "knowledge of facts, concepts, principles, and technological tools that are fundamental to being smart about money" (pg. 3). According to Hogarth, Beverly, and Hilgert (2003), a sudden interest in financial education has come about due to a) the increased complexity of the 21<sup>st</sup> century financial marketplace, b) a shift in responsibility for financial security or long-term well-being away from the institution to the individual, c) and a shift in demographics.

Although the interest in financial literacy or financial education has continuously increased in the past few decades, a 2007 survey of college students and parents indicated that both students and parents felt that college students are not prepared to deal with future financial challenges (Hartford Financial Services Groups Inc., 2007).

In a nationwide study commissioned by KeyBank and conducted by Harris Interactive, nearly one-third (32%) of the 1,003 college students surveyed indicated that they were "not at all" or "not very well prepared" for managing their money on campus during their freshman year (KeyBank & Harris Interactive, 2006).

### ***Teaching Financial Concepts***

Schools and colleges are important institutions for teaching financial concepts. Several states have developed financial standards for middle schools and high schools (National Council on Economic Education, 2007). In a study conducted by Bernheim, Garrett, and Maki (2001) to assess the effects of state mandated financial courses on students' financial behavior, a positive effect on the rates at which individuals save and accrue wealth during their adult life was found. Mandell (2004) also noted that students who had taken a personal finance course in high school performed better on a national financial literacy examination than students who had not taken such a course. Studies pertaining to colleges and universities offering courses in financial concepts have also documented positive relationships between students' performance. Having coursework in business was found by Chen and Volpe (1998) to be a significant factor for higher levels of knowledge in personal finance and for significantly reducing students' chances of making incorrect decisions. Peng, Bartholomae, Fox, and Cravener (2007) also found a relationship between financial courses taken in college and students' knowledge of investment.

Although many of the studies indicate positive associations between teaching financial concepts in schools, some studies have found no association. For example, Tennyson and Nguyen (2001) did not find a significant difference between the scores of students from states that required general curriculum mandates for financial literacy and those students from states not requiring general curriculum mandates. They did, however, find a significant difference between the financial knowledge test scores of those students attending schools in states with

specific mandated courses and those students attending schools with general or no mandates. Students having specific mandated coursework scored higher.

### ***Teacher Self-Efficacy***

Self-efficacy, an important construct in psychology and education, is defined as ones' judgments of his or her capabilities to accomplish a given task (Bandura, 1997). It is recognized, according to Barkley and Burns (2000), as a tool used to help bring about behavioral change. According to Bandura's (1994) social cognitive theory, a person with a low level of perceived self-efficacy is less likely to accomplish a given task than a person with a higher level of perceived self-efficacy. Bandura (1977) further suggests that ones' self-efficacy is developed or constructed from four major sources: mastery experience (perceptions of being successful at a task), vicarious experiences (observing a task being performed), social or verbal persuasion (feedback from others), and physiological and emotional arousal (physical feedback or feelings involved with performing a task).

In the education arena, much research has been conducted on teachers' self-efficacy. Hoy (2004) describes teachers' sense of efficacy as a "judgment about capabilities to influence student engagement and learning, even among those students who may be difficult or unmotivated" (p.1).

A number of studies have explored the possible relationship between teachers' self-efficacy and student outcomes (Ashton & Webb, 1986; Ross, 1992; Pajares & Graham, 1999; Zeldin & Pajares, 2000). Teaching efficacy has been linked to math and reading achievement (Ashton & Webb, 1986; Rosenholtz, 1989; Moore & Esselman, 1992) and motivation (Ashton & Webb, 1986; Roeser, Arbretton, & Anderman, 1993). In addition, Ross (1994) reviewed 88 studies that investigated teacher efficacy and concluded that "higher efficacy is associated with the use of teaching techniques which are more challenging and difficult with teachers' willingness to implement innovative programs and with humanistic classroom management practices" (p. 23).

### **Purpose and Objectives**

The overall purpose of this study was to examine prospective teachers' financial knowledge, use of financial products, and their perceived self-efficacy towards teaching the basic principles of personal finance. Specifically, the research objectives were:

1. Identify prospective teachers' level of financial knowledge, use of financial products, and perceived self-efficacy towards teaching basic principles of personal finance;
2. Determine if differences exist among prospective teachers' financial knowledge relative to demographics; and
3. Determine if differences exist among prospective teachers' financial knowledge relative to use of financial products and perceived self-efficacy towards teaching basic principles of personal finance.

### **Method**

#### ***Sample***

A non-probability sampling technique was employed in selecting the sample. A convenience sample of prospective teachers was drawn from a public Historically Black College or University (HBCU). The sample size of 98 consisted of 78 seniors and 20 graduate students who were participating in a student-teacher orientation meeting in southern Alabama. As shown in Table 1, a little more than half (58.6%) of the respondents were between 20 to 25 years of age.

The majority of the respondents were African-American (72.7%) and female (61.6%). Seventy-three percent of the respondents were single and only 17.2% were married. Due to missing responses, the sample size varied from 98 to 89.

Table 1  
*Demographic Data on Prospective Teachers*

Demographic Variables	<i>f</i>	%
<b>Age</b>		
21 – 25	58	58.6
26 – 30	16	16.2
Over 30	25	25.3
<b>Gender</b>		
Male	38	38.4
Female	61	61.6
<b>American Citizen</b>		
Yes	92	92.6
No	6	6.1
<b>Ethnicity</b>		
African American	72	72.7
White American	19	19.2
Asian American	1	1.0
Hispanic American	2	2.0
Native American	1	1.0
Other	3	3.0
<b>Marital Status</b>		
Never Married	72	72.7
Married,	17	17.2
Divorced	7	7.1
Widowed	2	2.0
<b>Classification</b>		
Senior	78	78.7
Graduate	20	20.2

### ***Instrumentation***

The Surveys of Consumers Finance (SCF), developed by the Federal Reserve (2001) and a researcher, developed a teaching efficacy scale utilized in gathering data to assess prospective teachers' level of financial knowledge and their self-efficacy towards teaching basic principles of personal finance. Five aspects of personal finance created the overall financial knowledge scale. The aspects were general financial management, which was labeled GFM, credit, savings, investments, and mortgage. Using the correct responses from each respondent, a mean percentage was calculated for each aspect of the scale and for the overall scale. The teaching

efficacy scale was assessed for reliability. Reliability was assessed by a pilot group of education students from an HBCU in the southern region of the United States. Twenty-five prospective teachers from the same HBCU, but one semester prior to conducting the study, were chosen to pilot test the instrument. The instrument's overall internal reliability of .88 was assessed using Cronbach's alpha.

The questionnaire was distributed to and collected from 98 students who had completed all coursework and were participating in a two-day orientation meeting for student-teachers. The prospective teachers were asked to answer six demographic questions, six questions pertaining to whether or not they owned various financial products, twenty-eight true and false questions about basic personal finance, and eight statements pertaining to their perceived ability to teach basic concepts in personal finance (efficacy). A four-point scale, with 4 representing "very sure" to 1 representing "very unsure," was utilized in assessing the efficacy score. Higher scores on the efficacy scale indicated higher efficacy.

### Findings

#### ***Objective One: Identify prospective teachers' level of financial knowledge, use of financial products, and perceived efficacy towards teaching basic principles of personal finance***

The overall results of the financial scale are presented in Table 2. The prospective teachers correctly answered, on average, 67.86% of the 28 questions on the financial knowledge scale. Findings of Hogarth et al., (2003) indicated that consumers taking the same test scored approximately the same score (67%). Prospective teachers, however, were most knowledgeable about savings (80.0%) and mortgage (76.01%). They were least knowledgeable about investments (59.09%) and credit (61.62%).

Table 2

*Percentage of Correct Responses and Overall Means of Prospective Teachers' Financial Knowledge Subscales (N=99)*

Statement	% of correct responses
Q1. Making payments late on your bills can make it more difficult to take out a loan.	96.0
Q2. The finance charge on your credit card statement is what you pay to use credit.	62.6
Q3. If you expect to carry a balance on your credit card, the APR is the most important thing to look at when comparing credit card offers.	91.9
Q4. Your credit rating is not affected by how much you charge on your credit cards.	74.7
Q5. Using extra money in a bank savings account to pay off high interest rate credit card debt is a good idea.	72.7
Q6. If you are behind on debt payments and go to a credit counseling service, they can get the federal government to apply your income tax refund to pay off your debts.	36.4
Q7. If your credit card is stolen and someone uses it before you report it missing, you are only responsible for \$50, no matter how much they charge on it.	25.3
Q8. Creditors are required to tell you the APR that you will pay when you get a loan.	80.8

Statement	% of correct responses
Q9. Your credit report includes employment data, your payment history, any inquiries made by creditors, and any public record information.	76.8
Q10. If you have any negative information on your credit report, a credit repair agency can help you remove that information.	33.3
Q11. With compound interest, you earn interest on your interest, as well as on your principal.	72.7
Q12. All investment products bought at your bank are covered by FDIC insurance.	42.4
Q13. Mutual funds pay a guaranteed rate of return.	39.4
Q14. A stock mutual fund combines the money of many investors to buy a variety of stocks.	68.7
Q15. Over the long-term, stocks have the highest rate of return on money invested.	61.6
Q16. If you buy certificates of deposit, savings bonds, or treasury bills, you can earn higher returns than on a savings account, with little or no added risk.	79.8
Q17. The earlier you start saving for retirement, the more money you will have because the effects of compounding interest increase over time.	81.8
Q18. Whole life insurance has a savings feature while term life insurance does not.	64.6
Q19. If you have a savings account at a bank, you may have to pay taxes on the interest you earn.	48.5
Q20. If the interest rate on an adjustable rate mortgage loan goes up, your monthly mortgage payments will also go up.	68.7
Q21. You could save thousands of dollars in interest costs by choosing a 15-year rather than a 30-year mortgage.	85.9
Q22. Repeatedly refinancing your home mortgage over a short period of time results in added fees and points that further increase your debt.	72.7
Q23. When you use your home as collateral for a loan, there is no chance of losing your home.	76.8
Q24. You should have an emergency fund that covers two to six months of your expenses.	88.9
Q25. Your bank will usually call to warn you if you write a check that would overdraw your account.	73.7
Q26. Employers are responsible for providing the majority of funds that you will need for retirement.	60.6
Q27. The cash value of a life insurance policy is the amount available if you surrender your life insurance policy while you're still alive.	65.7
Q28. After signing a contract to buy a new car, you have three days to change your mind.	39.4

Statement	% of correct responses
<b>Overall Mean Score</b>	<b>65.80</b>
<b>Credit</b> (q2-q10)	<b>61.62</b>
<b>Savings</b> (q11, q16, q18, q19, q24)	<b>70.91</b>
<b>Investments</b> (q12-q15, q17, q26)	<b>59.09</b>
<b>Mortgage</b> (q20-q23)	<b>76.01</b>
<b>GFM</b> (q1, q25, q27, q28)	<b>68.69</b>

Prospective teachers reported on six financial products. A little more than half of the prospective teachers (52.0%) had at least three of the six financial products (median = 3). As indicated in Table 3, only 10% of the respondents had all of the financial products. A large percentage (92.9%) of the respondents had a checking account, yet only about two-thirds (66.7%) of them had a savings account. Approximately 63.6% had at least one credit card, 36.4% used a spending plan, and only 31.3% had financial goals.

Table 3  
*Percentage of Financial Products Owned or Used by Prospective Teaching (N=98)*

Financial Products	f	%	Median
Number Owned			3
Zero	1	1.0	
One	5	5.1	
Two	18	18.2	
Three	27	27.3	
Four	16	16.2	
Five	21	21.2	
Six	10	10.1	
<b>Type Owned</b>			<b>% of respondents</b>
Checking account			92.9
Credit card			63.6
Spending plan or budget			36.4
Savings account			66.7
Emergency fund			31.3
Financial goals			63.6

Table 4 shows the mean and standard deviation for each of the eight items in the efficacy scale. Prospective teachers' overall efficacy mean score was 2.70 (sd =.60). Respondents perceived themselves as being most capable of teaching general money management ( $\bar{x}$  =3.01,

sd = .66), savings ( $\bar{x} = 2.86$ ,  $sd = .70$ ), and credit management ( $\bar{x} = 2.82$ ,  $sd = .82$ ). They felt least capable of teaching investments ( $\bar{x} = 2.32$ ,  $sd = .86$ ) and mortgage ( $\bar{x} = 2.36$ ,  $sd = .96$ ).

Although findings from Table 2 indicated that prospective teachers were least knowledgeable about credit, they perceived themselves as being most capable of teaching credit management. Surprisingly, they felt least capable of teaching about mortgage, yet their knowledge score for mortgage was among their highest scores. Also shown, prospective teachers were least knowledgeable about investments and they also felt less capable of teaching investments.

Table 4  
*Perceived Teaching Efficacy of Prospective Teachers Regarding Personal Finance Concepts*

I have the capability to teach students to make informed decisions about ...	<i>f</i>	<i>%</i>	$\bar{x}$	<i>sd</i>
Credit management			2.82	.82
<i>not at all true (1)</i>	10	10.9		
<i>hardly true (2)</i>	9	9.1		
<i>moderately true (3)</i>	57	57.6		
<i>exactly true (4)</i>	13	13.1		
Saving			2.86	.70
<i>not at all true (1)</i>	6	6.1		
<i>hardly true (2)</i>	10	10.1		
<i>moderately true (3)</i>	62	62.6		
<i>exactly true (4)</i>	10	10.1		
Spending			2.75	.75
<i>not at all true (1)</i>	8	8.1		
<i>hardly true (2)</i>	14	14.1		
<i>moderately true (3)</i>	58	58.6		
<i>exactly true (4)</i>	8	8.1		
Investment			2.32	.86
<i>not at all true (1)</i>	17	17.2		
<i>hardly true (2)</i>	30	30.2		
<i>moderately true (3)</i>	35	35.4		
<i>exactly true (4)</i>	5	5.1		
Mortgage			2.36	.96
<i>not at all true (1)</i>	22	22.2		
<i>hardly true (2)</i>	18	18.2		
<i>moderately true (3)</i>	39	39.4		
<i>exactly true (4)</i>	7	7.1		
General money management			3.01	.66
<i>not at all true (1)</i>	4	4.0		
<i>hardly true (2)</i>	7	7.1		
<i>moderately true (3)</i>	62	62.6		
<i>exactly true (4)</i>	16	16.2		
Insurance			2.74	.81
<i>not at all true (1)</i>	9	9.1		
<i>hardly true (2)</i>	15	15.2		
<i>moderately true (3)</i>	52	52.5		
<i>exactly true (4)</i>	11	11.1		

Consumer protection			2.67	.85
<i>not at all true (1)</i>	11	11.1		
<i>hardly true (2)</i>	18	18.2		
<i>moderately true (3)</i>	49	49.5		
<i>exactly true (4)</i>	11	11.1		
<b>Overall</b>			<b>2.70</b>	<b>.60</b>

Note: Data were coded 4 = Exactly True, 3 = Moderately True, 2 = Hardly True, and 1 = Not at All True

**Objective Two: Determine if differences exist among prospective teachers' financial knowledge relative to demographics.**

The difference between the financial knowledge of prospective teachers relative to age, gender, ethnicity, marital status, and classification were examined. Table 5 displays the mean percentage of correct responses for overall financial knowledge and the five aspects of financial knowledge (credit, savings, investments, mortgage, and GFM). Analysis of variance (ANOVA) was used to identify the differences in knowledge levels. Regarding overall financial knowledge, prospective teachers at the graduate level were significantly more knowledgeable about all aspects of personal finance than those at the senior level ( $f = 7.94, p \leq .01$ ). On average, the graduate level respondents answered 72.14% of the questions correctly, whereas the senior respondents answered only 64.19% correctly. No significant difference was found between prospective teachers' overall financial knowledge and age, gender, ethnicity, and marital status.

Prospective teachers' knowledge on the various subscales differed only on savings and investments. The findings suggest that on the savings subscale, prospective teachers differed in knowledge based on age, marital status, and classification. The percentage of correct answers for prospective teachers on the savings subscale was 64.48% for those between 21 to 25 years, 75.00% for those between 26 to 30 years, and 83.20% for those over 30 years of age. The value of the F-statistics ( $f = 6.75, p \leq .01$ ) indicated a significant difference existed. The significant difference was further examined using a post hoc test. Prospective teachers 26 years of age and over were significantly more knowledgeable about savings than those 25 years and younger. Also, prospective teachers who had never married were less knowledgeable about savings than those who were married, divorced, or widowed ( $x = 67.50, x = 80.77$ , respectively;  $f = 6.63, p \leq .05$ ). This finding supports that of Danes and Hira (1987) in which they found that married students are more knowledgeable about personal finance. Similarly, data indicated that graduate level respondents scored significantly higher ( $x = 80.00$ ) than senior level respondents ( $x = 68.72$ ) on savings ( $f = 3.88, p \leq .05$ ).

Relative to ethnicity, African American respondents scored significantly lower ( $x = 56.71$ ) than non-African Americans ( $x = 65.91$ ) only on investments ( $f = 4.13, p \leq .05$ ). The findings from the ANOVA support the findings of Chen and Volpe (1998) that African Americans' knowledge of investments was lower than that of other college students.

Table 5  
Mean Percentage of Correct Responses to Each Category of Financial Knowledge by Characteristics of Sample and Results of ANOVA

	Credit	Saving	Investment	Mortgage	GFM	Overall
Age						
21 – 25	59.58	64.48	56.03	68.53	65.52	61.82
26 – 30	59.72	75.00	63.54	84.38	76.56	69.20
Over 30	67.55	83.20	63.33	88.00	71.00	72.86
F statistics	(2.89)	(6.75)**	(1.83)	(6.29)	(2.12)	(10.41)

Gender						
Male	60.82	71.58	61.40	76.97	67.11	66.07
Female	62.11	70.49	57.65	75.41	69.67	65.63
F statistics	(.183)	(.051)	(.904)	(.081)	(.372)	(.033)
Ethnicity						
African American	61.27	68.61	56.71	74.31	68.06	64.43
Non African American	60.87	78.26	65.94	82.61	70.65	69.57
F statistics	(.013)	(3.11)	(4.13)*	(1.77)	(.283)	(3.55)
Marital Status						
Never Married	60.49	67.50	58.80	75.35	67.71	64.53
Married, Divorced, Widowed	63.67	80.77	60.26	78.85	72.12	69.37
F statistics	(.934)	(6.63)*	(.110)	(.331)	(.897)	(3.37)
Classification						
Senior	60.40	68.72	57.69	74.04	66.99	64.19
Graduate	65.00	80.00	65.00	85.00	76.25	72.14
F statistics	(1.64)	(3.88)*	(2.35)	(2.78)	(3.39)	(7.94)**

Notes: \* significant at the 0.05 level; \*\* significant at the 0.01 level or greater.

***Objective Three: Determine if differences exist among prospective teachers' financial knowledge relative to use of financial products and efficacy towards teaching basic principles of personal finance.***

Table 6 shows the results of an ANOVA used in examining differences in prospective teachers' financial knowledge with regards to their perceived teaching efficacy and the number of financial products owned. The respondents' responses to the number of financial tools owned were aggregated into two groups based on the groups median score of three. Respondents having zero to three financial products formed group one (N=51) and those having four to six financial products formed group two (N=47). F-statistics indicated no significant difference on any of the financial knowledge subscales as well as overall financial knowledge (credit:  $f = .168, p = .32$ ; savings:  $f = 1.70, p = .20$ ; investments:  $f = .72, p = .40$ ; mortgage:  $f = .59, p = .44$ ; GFM:  $f = .43, p = .52$ ; and overall financial knowledge:  $f = 1.00, p = .32$ ). In other words, prospective teachers' financial knowledge did not differ in regards to the number of financial products they had.

Prospective teachers' perceived efficacy scores were also combined into two groups based on the mean score of the entire group ( $x = 2.70$ ). Those with efficacy scores equal to or less than the group mean created group one (low efficacy; N=38) and those with efficacy scores greater than the overall mean formed group two (high efficacy; N=51). No significant difference ( $f = 1.89, p = .17$ ) was found between the overall financial knowledge of prospective teachers with low teaching efficacy ( $x = 64.10$ ) and those with high teaching self-efficacy ( $x = 67.51$ ). Also, there was no significant difference between the knowledge of prospective teachers with low teaching efficacy and those with high teaching efficacy relative to their knowledge of credit ( $f = .74, p = .39$ ), savings ( $f = 2.70, p = .10$ ), investments ( $f = .544, p = .46$ ), mortgage ( $f = .004, p = .95$ ), and GFM ( $f = .638, p = .43$ ). The financial knowledge of prospective teachers who perceived themselves as being most capable of teaching the basic principles of personal finance was no different than those that were less efficacious.

Table 6

*Mean Percentage of Correct Responses to Each Category of Financial Knowledge by Number of Financial Products Used, Teaching Efficacy, and Results of ANOVA*

	Credit	Saving	Investment	Mortgage	GFM	Overall
<b>Number of Financial Product</b>						
0 to 3	62.22	68.00	57.33	74.00	67.50	64.64
4 to 6	60.99	74.04	60.64	78.19	70.12	67.02
F statistics	(.168)	(1.70)	(.723)	(.593)	(.425)	(1.00)
<b>Efficacy</b>						
Low	59.14	67.37	57.02	78.29	67.11	64.10
High	62.09	75.29	60.13	77.94	70.59	67.51
F statistics	(.741)	(2.70)	(.544)	(.004)	(.638)	(1.89)

*Notes: \* significant at the 0.05 level; \*\* significant at the 0.01 level or greater*

## Conclusion and Recommendations

### Conclusion

Results suggest that on average, participants answered only 68% of the questions correctly indicating that the prospective teachers' financial knowledge was fairly low. As confirmed in other studies, college students' financial knowledge level needs improvement (Chen & Volpe, 1998; Volpe, Chen & Parlicko, 1996; Danes & Hira, 1987), especially college students who will be going into the classroom to teach high school and elementary students the basic principles of personal finance. This finding supports the need to not only examine state mandates for financial literacy in middle and high schools, but to also examine financial literacy in teacher education programs. This finding should be motivation for all teacher education programs to incorporate personal finance into their course offerings.

It seems somewhat contradictory that many state mandates require students to have a certain competency level in finance, yet teachers are not required to have such levels. Family and Consumer Sciences teachers, specifically, must improve their financial knowledge because personal finance, money management, or economic issues is and has been an essential component of all areas of Family and Consumer Sciences since its beginning. For example, Family and Consumer Sciences teachers are expected to teach the many topics similar to the following: a) getting the most for one's food dollars while considering healthful diets, b) assessing the cost of consumer durables while also viewing them as an investment, c) purchasing a home while considering the tax benefits home ownership as well as a long-term investment, etc.

Although no difference was found in the overall financial knowledge of respondents based on age, gender, ethnicity, and marital status; prospective teachers obtaining a master's degree scored significantly higher than those obtaining a Bachelor of Science degree. When looking at each of the five aspects separately, differences in respondents' knowledge of savings were found between different age groups, different marital statuses, and different classifications. Older, married, and graduate level respondents were significantly more knowledgeable about savings than those who were younger, single, and senior-level college students. There may be a number of reasons why older, married students might be more knowledgeable. For example, one might expect that older, married students have had more out of the classroom experience with saving than younger, single students. With this in mind, experiential teaching methods that

provide authentic learning experiences, as well as problem-based teaching methods, should be used in promoting higher financial literacy among prospective teachers. Not only should these methods be used in teaching prospective teachers financial concepts, they should also be used by teachers, especially Family and Consumer Sciences teachers, when teaching financial management or consumer economics to students in middle and high schools.

Although there were no differences in prospective teachers' overall financial knowledge; when looking at ethnicity and financial knowledge, African American prospective teachers were less knowledgeable of investments than non-African Americans. This finding is consistent with those of Chen & Volpe (1998) in which they reported that African American students' knowledge of investments was significantly lower than that of other college students. Due to the fact that a large majority of African American teachers graduate from an HBCU, one would expect an HBCU to play a major role in helping to increase African American teachers' overall financial knowledge with greater emphasis on investments.

Although a large number of the prospective teachers had a checking account or credit card, only a small percentage of them used a spending plan or even had financial goals. Having more financial products, however, did not make a difference in prospective teachers' knowledge of personal finance.

Results tend to suggest that even though some teachers perceived themselves as being more capable of teaching the basic principles of personal finance than others, their knowledge scores, on average, were the same as all other prospective teachers. In other words, the more efficacious prospective teachers' knowledge of personal finance was statistically the same as that of less efficacious prospective teachers.

### **Recommendations**

Based on the findings of this study that prospective teachers' financial knowledge is low, teacher preparation programs need to integrate basic personal finance into the overall training of teachers. Further investigation of prospective teachers' financial knowledge is recommended. Because the efficacy of the prospective teachers towards teaching basic concepts relating to investments and mortgages, on the whole was fairly low, more opportunities or activities that will assist in developing their efficacy towards teaching such concepts are warranted.

### **Implications**

The results of this study have important implications for teacher education programs. Research indicates that the higher ones' self-efficacy towards successfully completing a task, the more likely he or she will successfully complete it (Bandura, 1994). Therefore, findings of teachers' self-efficacy towards teaching personal finance or money management have the potential for essential information to be used in developing and implementing intervention activities that will increase prospective teachers' overall efficacy towards teaching personal finance in schools. These findings also suggest that intervention activities geared toward increasing ones' self-efficacy may also increase teachers' overall knowledge of personal finance, which could lead to an increase in the knowledge of the students they teach.

This study focused on prospective teachers regardless of their majors. Further study might examine the financial knowledge of Family and Consumer Sciences teachers only to assess their efficacy in teaching financial concepts in the classrooms. Comparisons, between the financial knowledge and teaching efficacy of Family and Consumer Sciences teachers and Family and Consumer Sciences students, are needed to contribute to understanding why so many

students (family and consumer sciences students specifically) have low financial knowledge scores.

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### **Citation**

Brandon, D. P. & Smith, C. M. (2009). Prospective teachers' financial knowledge and teaching self-efficacy. *Journal of Family and Consumer Sciences Education*, 27(1), 14-28. Available at <http://www.natefacs.org/JFCSE/v27no1/v27no1Brandon.pdf>