

A Review Of Howard University's Financial Literacy Curriculum

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ABSTRACT

This article evaluates a financial literacy curriculum at the Howard University (HU) School of Business, by measuring the financial knowledge acquired after participating in a variety of programs. To evaluate the HU curriculum, the National Jump\$tart Coalition (NJC) survey was administered to collect data on financial knowledge and demographic characteristics. Descriptive statistics and regression analysis were used to study the data. The results show that HU-Business students performance was comparable to Jump\$tart's national average for college students and Business/Economics students. HU Business students scored higher than the Jump\$tart's African American student sample. The regression analysis helped identify key factors that influence financial awareness for HU students including having checking account, electronic tax preparation, taking a course in personal finance or money management, GPA, and frequently balancing check book.

Keywords: Financial Literacy; Financial Literacy Score; Assessment of Financial Literacy; Financial Knowledge Acquisition; CreditSmart

INTRODUCTION

In 1999, Howard University was asked by Freddie Mac along with four other universities to develop a consumer credit curriculum that could be used to educate college students and adults in the community. The curriculum CreditSmart[®], which is a multilingual financial education curriculum designed to help consumers build and maintain better credit, make sound financial decisions, and understand the steps to sustainable homeownership. (CreditSmart[®]: A Guide to Better Credit, Money Management, and Responsible Homeownership 2011.) CreditSmart[®] helped lay the foundation for our current financial literacy curriculum in the School of Business at Howard University (HU). As a result of the Howard University's involvement with the development of CreditSmart[®], the President of university was asked to testify on Capitol Hill at the Senate Hearing on "The State of Financial Literacy and Education in America" (Swygert & Lindsey, 2002). In preparation for the HU President's testimony, a Student Credit and Financial Awareness Survey (SC&FA), unique to Howard students, had been administered and analyzed for nine years

The purpose of this article is to provide a better understanding of relevant factors that may influence the success of financial education at the college level generally, but specifically among African American students. In particular, the following questions are addressed:

- Are there any unique socio-economic and demographic characteristics of the evaluated students that may impact financial learning?
- Are the evaluated students financial aware. If so, what are the key factors that influence their awareness? If not, what areas are they deficient?
- Are the current financial literacy educational paradigms effective?

LITERATURE REVIEW AND BACKGROUND

The Great Recession of the late 2000s has highlighted that the importance of individuals and families having the information, education, and tools to help them make better sound financial decisions in an increasingly intricate financial system. Studies have shown that financial difficulties of individuals and families can radically affect the financial health of local communities and regional economies. (Kingsley, T.G., Smith, R., & Price, 2009 & United Way, 2010) The Great Recession has also illustrated that financial well-being of individuals and families are fundamental to national financial stability. Hence, inadequate financial literacy is a barrier that can lower standard of living and wealth accumulation.

A growing body of financial literacy literature has emerged over the past 12 years. The literature primarily involved cross-sectional or longitudinal survey methods with some regression analysis. Many of the studies have focused on how knowledgeable Americans are about personal finance (Mandell, 2009; Lusardi, 2008; Volpe, Chen & Liu, 2006; & Chen & Volpe, 1999). Questions usually focus on financial concepts like obtaining a credit report, knowing the person's credit score, and distinguishing various types of credit. Some other studies focus on experiential use of credit such as the number of credit accounts a respondent has or the amount of personal debt (Brau, Homes, & Israeken, 2010; Hartford Financial Services Group, Inc., 2007; & Robert Manning 1999). Both knowledge-based and experiential-based surveys generally collect data on respondents' demographic characteristics as well. Table 1 presents a summary of seven financial literacy studies that provide insight into college students' financial literacy behavior or approaches to comprehend or measure financial literacy.

Table 1: A summary of studies on financial literacy in the United States

Author/Date	Topic	Sample	Questions	Average Score/Results
Brau, Homes & Israeken/(2010)	Financial Learning Activities	1493 College Students	Personal Finance Learning Activities/ Life Experiences/ Demographic	43% mean score; Age, marriage, credits, stock market impacts on financial literacy the strongest
Mandell/ (2009)	Financial Knowledge	1,032 College students	31 Financial Knowledge; 24 Demographic /Financial Experience	62.2 % mean score; students score improved with each year of college
Lusardi/2008	Financial Security after Retirement	1984 Adults	45 Basic Financial Concepts and Demographic	Financial illiteracy impacts negatively saving, retirement planning and wealth accumulation
Hartford FSG, Inc./(2007)	Financial Literacy Gap between Students & Parents	1,108 College Students; 1,086 Parents	Personal Finance Learning Activities	(24%) of students and 20% of parents say students are prepared to deal with the financial challenges after graduation
Volpe, Chen & Liu/(2006)	Knowledge of Personal Finance for Working Adults	212 Benefit Administrators	34 Personal Finance; 24 Demographic/Financial Experience	Deficiencies in employee's knowledge in the areas of retirement planning and personal finance
GAO/(2005)	Credit Report and Credit Score	1, 578 Consumers	25 Credit Report; 13 Dispute Resolution; 2 Identity Theft; Credit Score; 1 FACT Act; 9 Demographic	Most consumers understood credit reporting and score; 33 % obtained their credit score but 28 % did not comprehend credit score ranges
Manning/(1999)	Credit Cards	College Students: 300 Interviews; 400 Surveys	Credit Card Experience	81% of students had credit by end of 1st year; credit card debt imposed large and varied cost on students
Chen & Volpe/(1998)	Personal Finance Knowledge	924 College Students	Financial Decisions & 8 Demographic/Financial Experience	53 % mean score

All the articles reviewed collected data through the survey method. Three out of the eight studies included a definition of “financial literacy.” The Jump\$tart study (Mandell, 2008) defined financial literacy as the ability to use knowledge and skills to manage financial resources effectively for lifetime financial security. This definition includes both “knowledge” and “ability” with an intended outcome (i.e., lifetime financial security/well-being). The Jump\$tart definition uses the terms financial knowledge and financial literacy interchangeability. Five of the studies reviewed categorize as financial literacy the following four key subject areas: basic concepts on money management, borrowing, savings/investment, and financial protection. Seven out of eight of the studies focus on college students' financial knowledge or financial experience. The data collection process varied across studies. Most were collected by personal interviews or by paper. Other collecting processes included on-line, telephone

interviews, or self reported. In general, the results for many of the studies indicate that most students and segments of the adult population are not prepared to take on financial decision-making. They have deficiencies in financial knowledge and experience which impacts decisions about saving, investments, retirement planning, and wealth accumulation. Supplementary discussion of the literature on financial literacy can be founded in Huston (2010), Amromin, Ben-David, Agarwal, Chomsisengphet and Evanoff (2010), and McCormick (2009).

Using concepts, methods and empirical evidence from financial literacy literature and personal finance studies, the research team adapted the National Jump\$tart Coalition (NJC) survey to assess our financial education curriculum. Our choice was based on the clarification of the well-defined survey instrument at that time and its ability to measure the financial literacy construct of both knowledge and application. In addition, Jump\$tart survey covered all four personal finance content areas and it was administered to college students in 2008. The HU views financial education curriculum as an input intended to increase the student’s human capital, specifically financial knowledge, skills, and experiences. The HU construct infers that financial education influences personal financial behavior, thus application. This line of reasoning is consistent with the Huston’s (2010) approach and is presented in Figure 1.

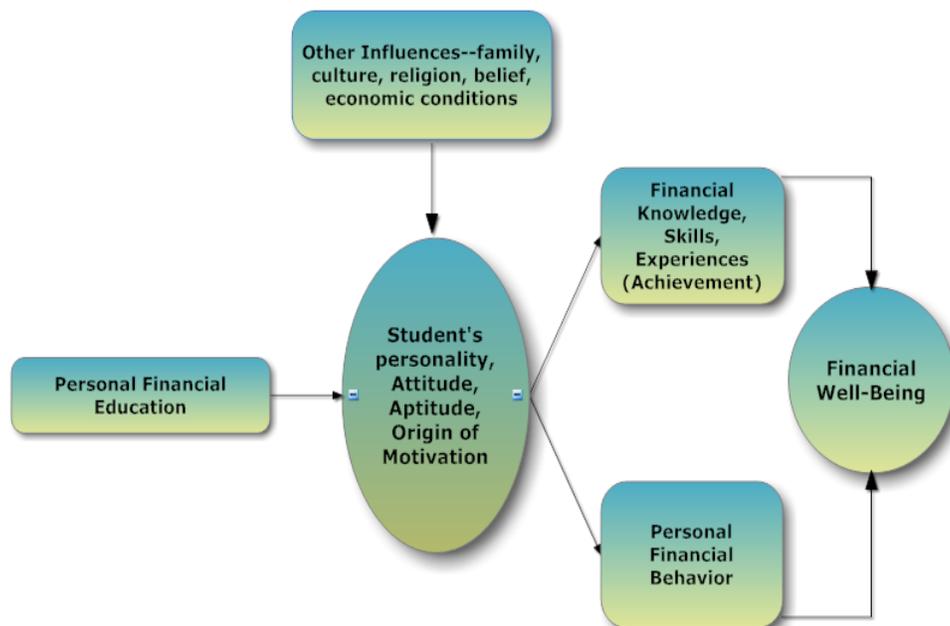


Figure 1: Knowledge and Application: A Financial Literacy Construct.

Figure 2 presents the existing financial literacy delivery system at the HU School of Business. Two elective courses are offered designed specifically for personal financial management--Principles of Personal Financial Planning (FINA 320) and Personal Money Management (FIN 210). Principles of Personal Financial Planning is for business majors only and is a comprehensive analysis of personal financial planning process as it relates to setting up the total financial and estate affairs of individuals and families. Prerequisites for this course are Finance Principles or Business Finance. Personal Money Management is designed to give non-business majors exposure to personal financial decision-making in the areas of credit, banking, taxes, record keeping, real planning, retirement, and employment benefits. There are no prerequisites for this course.

In addition, to the two complete courses, HU offers two required courses for business majors that provide modules/seminars/workshops in the area of money management, credit, and investment. These courses are Business Orientation (MGMT 001) and Managerial Economics (BECN 330). Business Orientation is designed to prepare our students to meet the challenges of the School of Business and the corporate world. The money management module in the orientation course focuses on financial goals setting, budgeting, and the use of credit. No prerequisites are

required. The other required course is Managerial Economics, which analyzes decision-making in the enterprise using economic principles. Through seminars and workshops economic principles are applied to individual behavior by focusing on topics related to budgeting, credit behavior, saving, and investment.

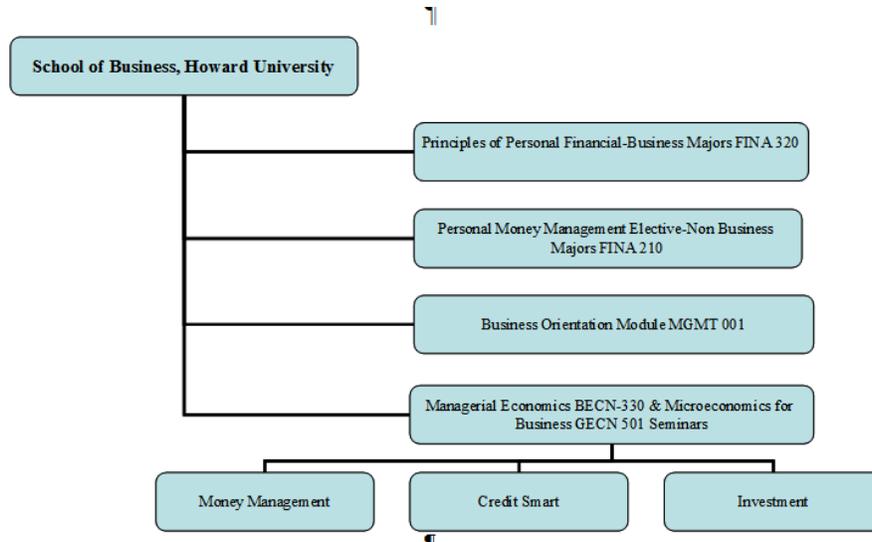


Figure 2: Current Financial Literacy Curriculum

METHOD

The fundamental approach applied in this study to evaluate the financial education curriculum in the School of Business is the survey method and regression analysis. The National Jump\$tart Coalition (NJC) survey was used to collect data on financial literacy knowledge and demographic characteristics. To test the financial literacy knowledge of our students the NJC survey was administered to HU students. Jump\$tart Annual Report (2009) gives the details on the questions, question design, and sampling for NJC survey. Jump\$tart survey began in 1997-98 school year, as a nationwide survey of 12th grade students to determine the ability of our young to survive in today’s complex economy. In 2008, the survey was expanded to include college students. The college instrument consisted of 56 questions. The first 31 questions test the total financial literacy knowledge (TFLK). The other questions capture either standard demographic information about the students or evidence of experiential financial behavior, such as credit card use, accumulation of debt, checking account, checkbook balancing habits, and incidence of overdrafts, and manner of tax preparation. Using the HU students’ results from the NJC survey, average financial literacy scores are computed and compared to Jump\$tart’s national sample and t-tests are conducted to test for statistically significant differences. A regression model describing total financial literacy was developed. From this model, inferences were made about the financial awareness of our student population in the School of Business along with identifying key factors that influence total financial literacy knowledge.

RESULTS

National Jump\$tart Coalition (NJC) survey. Figure 3, figure 4, and Figure 5 each show the percent correct responses for the NJC financial literacy assessment questions. The Jump\$tart and HU responses are compared and statistically evaluated using t-tests. The total financial literacy (TFL) score is based on 31 questions. While the other scores measure five key Personal Finance Standards identified by Jump\$tart Coalition. These standards capture the following: understanding income, money management, saving and investment, spending, and credit.

Figure 3 shows a slight difference between Jump\$tart and HU performance on the financial literacy assessment test. This difference was not statistically significant. Areas that need the greatest improvements include topics on saving, investment, and money management. Improving our students’ knowledge of personal investments will be one of our biggest challenges, since research (Oliver and Shapiro, 2006) has shown understanding various

types of investments historical has been a major issue for African Americans’ wealth creation. Oliver and Shapiro note despite comparable incomes, middle-class blacks have fewer of their wealth holdings in capital-producing assets than similarly situated whites. Among high earning families (\$50,000 a year or more) 17 percent of whites’ assets are in stocks, bonds, and mortgages versus 5.4 percent for blacks.

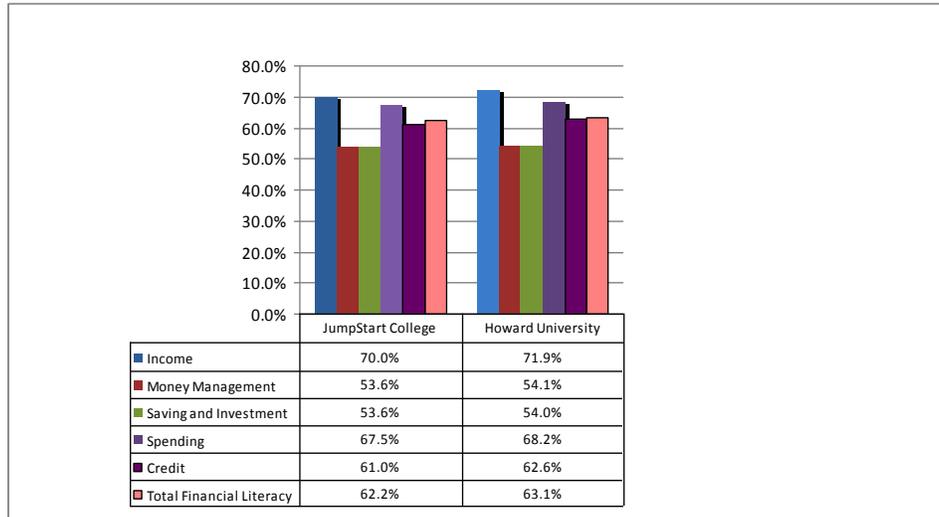


Figure 3: JumpStart and Howard University Financial Literacy Scores by Key Categories & Total

Figure 4 compares JumpStart’s Business and Economics majors to HU students. Since the majority of the students surveyed at HU were business majors or minors, we thought this comparison was better suited as matched-paired. The results were the same as above. There was no statistically significant difference in financial literacy scores.

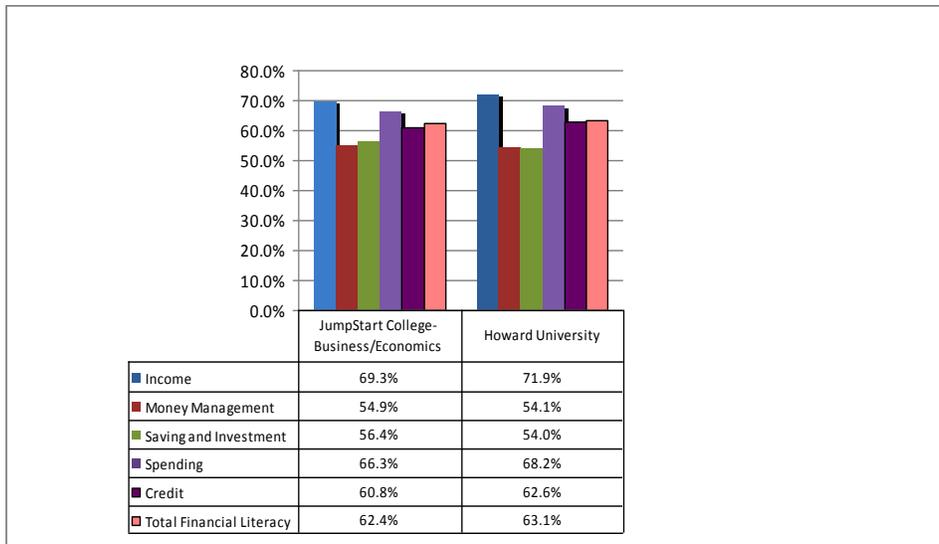


Figure 4: JumpStart’s Business and Economics Major and Howard University Financial Literacy Scores by Key Categories & Total

Figure 5 compares Jump\$Start’s African American sample to HU students. Since nearly all students surveyed at HU were African American, African or Caribbean, this sample was better suited for comparison. The results were quite different. In all assessment areas, the HU students performed better than the Jump\$Start’s African American sample. The differences were all above six percent and were statistically significant at the 99 percent level of confidence. The greatest difference (9.5%) was in the area of understanding income and the smallest (6.2%) was in the area of spending.

In general, the HU students performed as well as Jump\$Start samples overall and as compared to Business and Economics majors. HU students performed on average seven percentage points better than the Jump\$Start African American student sample. We attribute HU students’ better performance to their exposure to calculus, statistics, finance, economics, and accounting as well as the distinctly nurturing environment at Historically Black Colleges and Universities (Gasman, 2008). The most unique discoveries about our students are that the majority of them come from middle class families that are highly educated and that our students had extremely high educational aspirations. Over 54.4% of our students’ parents have incomes above \$80,000 and 83.7% had attended college. Also, 81.9% of our students aspired to obtain a graduate or professional degree. These demographics help to explain why our students, who are predominately African American scored higher on the financial literacy assessment test than the Jump\$Start’s African American sample. There is evidence that family characteristics impact HU student’s financial learning (Kelly, Lindsey-Taliefero, Brent & Price, 2010). Kelly et al. found that parents’ income and self reported social class are association with HU students’ perception of their credit and that social class is association with scrutinizing their credit report.

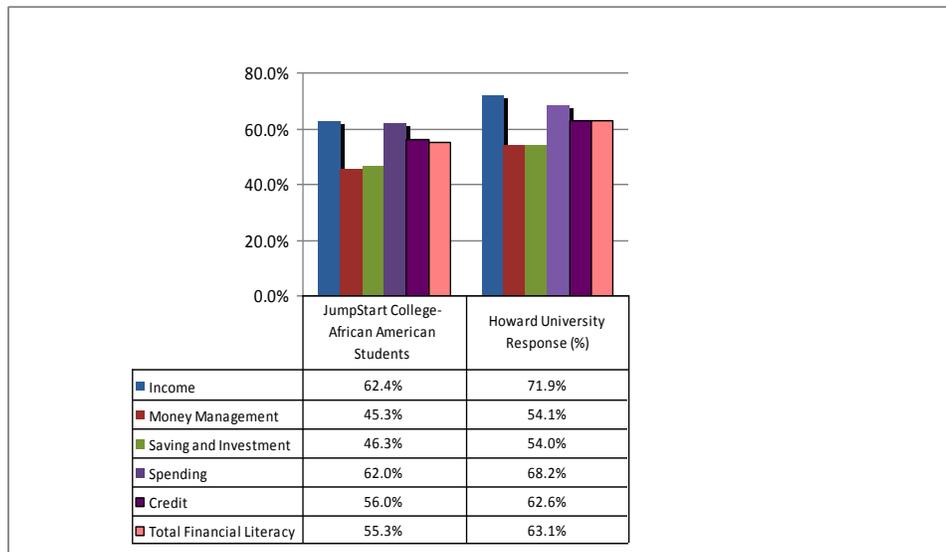


Figure 5: Jump\$Start’s African American Students and Howard University Financial Literacy Scores by Key Categories &Total

Modeling total financial literacy knowledge score. A multiple regression model was used to estimate how various independent variables (i.e., age, education, income, amount of credit card debt, and etc.) influence the dependent variable—total financial literacy knowledge (TFLK) score or the percent correct answers. The financial literacy score is a cumulative and represents the sum of the correctly answered 31 questions on the Jump\$Start financial literacy test.

Table 2 lists the independent variables used in our financial literacy model. They are clustered into three groups: demographic and family characteristics, formal learning activities, and experiential learning activities. There were 166 students that took the Jump\$Start financial literacy assessment test. On average, students answered 63.1 percent of the questions correctly. Most of the students (60.1 %) were 21 years old or less. Females made up

67.5 percent of the sample. Students expected to earn more than \$50,000 after graduation 68.7% of the time and planned to earn an advance degree 81.9% of the time. A large share of the students' parents (83.7%) attended some college, or had college degrees / graduate degrees. The majority, 54.4 % of the students' parents, earn income of \$80,000 or more. A high percentage of the students (68.7%) had grade point averages that were 3.0 and above. Only 10.2 percent of the HU students had taken a course in personal finance, while 31.9 % reported taking a money management workshop or investment seminar. Fifty percent of the students have student loan debt over \$20,000 and 21.7% had credit card debt over \$1,000. The students rarely had auto loans and mortgages. Nearly all students had checking account but just over half balanced their checkbook frequently. Almost a fifth of students did the taxes on the on-line. One researcher (Lightspeed Research, 2011) estimates that 38% of Americans do their taxes online.

Table 2: Descriptive Summary of Measures Used in of Financial Literacy Model

Category	Mean/Mode
Dependent Variable:	
Total Financial Literacy Knowledge	63.1% = mean score
Independent Variables:	
Demographic and Family Characteristics	
Age	60.2% = 21 years old or less
Gender	67.5% = female
Students Expected Income	68.7% = \$50,000 or greater
Parent's Education	83.7% = Some college or more
Parent's Income	54.4% = \$80,000 or more
Formal Learning Activities	
GPA	68.7% = 3.0 or greater
Student's Highest Expected Level of Education	81.9% = Graduate or professional degree
Personal Finance Course in College	89.8% = Did not take course
College Money/Investment Seminar	68.1% = Did not take seminar
Experimental Learning Activities	
Student Loan Debt	50.0% = Student loan debt > \$20,000
Credit Card Debt	78.3% = Student credit card debt < \$1,000
Auto Loan	93.4% = Did not have auto loans
Mortgage Loan	95.2% = Did not have mortgages
Bank Account	98.2% = Had checking account
Frequency of Balancing Checkbook	59.6% = Rarely balance checkbook
Tax Prepared on Computer	80.7% = Did not prepared taxes electronically

Table 3 provides the regression results. The regression model is evaluated by considering both the impact of each independent variable on TFLK score and statistical significance of estimates. Most of the data classifies students into categories (i.e., male/female or different income levels). One of the categories acts as the base state and independent variable shows whether the students are in or not in that base state. For example, in the case of having a checking account, not having a checking account is the base-state. Thus, having a checking account increases the total knowledge score on average by 18.9 percentage points as compared to not having a checking account. In a similar manner, other binary variables are constructed.

TFLK score was estimated using ordinary least squares SPSS backward method. Eight models were estimated starting with sixteen independent variables. The models had R^2 values ranging from 0.359 to 0.348 and were statistically significant at the 99 percent level of confidence. Model 1 has the full set of independent variables and Model 8 has includes those independent variables meeting the backward criterion that the probability of F-to-remove is greater than or equal to 0.100. Both models are discussed in below.

Model 1 includes all the variables and had 9 independent variables statistically significant either at 95 percent level of confidence or above. These variables include the following: age, GPA, College-Personal Finance Course, College-Money Management/Investment Seminars, Having a Bank Account, Frequency Balancing Checkbook; and Online Tax Preparation. Formal and experimental learning activities appear to have the greater impact on financial literacy knowledge. Taking a college course in personal finance or a seminar in money management or investment increases your total knowledge score by 7.37 and 2.33 percentage points, respectively.

Table 3: Dependent Variable: Financial Literacy Knowledge (Coefficients and t-values)

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Constant	27.78 3.51 ***	27.53 3.62 ***	27.13 3.60 ***	27.12 3.61 ***	26.74 3.58 ***	27.73 3.81 ***	28.02 3.86 ***	29.28 4.09 ***
AGE	4.31 1.98 **	4.28 1.99 **	4.20 1.97 **	3.95 1.91 *	3.79 1.86 *	3.75 1.84 *	3.81 1.88 *	3.56 1.77 *
Gender	-1.28	-1.29	-1.25	-1.16				
Student's Expected Income	-0.62 1.35 0.65	-0.63 1.33 0.65	-0.61 1.29 0.63	-0.57 1.26 0.62	1.28 0.63			
Parent's Education	1.45 0.55	1.42 0.54	1.57 0.60	1.61 0.62	1.69 0.65	1.67 0.65		
Parent's Income	1.39 0.71	1.42 0.73	1.40 0.73	1.39 0.72	1.53 0.81	1.67 0.88	1.92 1.04	
GPA	5.49 2.66 ***	5.45 2.68 ***	5.55 2.76 ***	5.63 2.81 ***	5.61 2.81 ***	5.68 2.85 ***	5.67 2.85 ***	5.99 3.05 ***
Student's Highest Expected Level of Education	-0.30 -0.12							
Personal Finance Course in College	7.37 2.33 **	7.32 2.34 **	7.47 2.41 **	7.59 2.47 **	7.61 2.48 ***	7.38 2.42 **	7.58 2.51 ***	7.63 2.52 ***
College Money/Investment Seminar	4.56 2.17 **	4.58 2.19 **	4.67 2.25 **	4.79 2.34 **	4.81 2.35 **	4.87 2.38 **	4.81 2.36 **	5.04 2.49 ***
Student Loan Debt	6.17 3.18 ***	6.17 3.19 ***	6.11 3.18 ***	6.12 3.19 ***	6.28 3.32 ***	6.20 3.29 ***	6.16 3.28 ***	5.94 3.18 ***
Credit Card Debt	-0.97 -0.40	-0.99 -0.41						
Auto Loan	-1.88 -0.44	-1.78 -0.43	-1.97 -0.48					
Mortgage Loan	9.21 * 1.83	9.15 * 1.83	8.72 * 1.79	7.95 * 1.73	7.59 * 1.67	8.00 * 1.79	7.52 * 1.71	7.56 * 1.72
Bank Account	18.91 2.66 ***	18.98 2.69 ***	19.01 2.70 ***	18.85 2.69 ***	18.78 2.68 ***	18.52 2.66 ***	19.46 2.86 ***	19.09 2.81 ***
Frequency of Balancing Checkbook	5.12 2.64 ***	5.12 2.65 ***	5.21 2.72 ***	5.25 2.75 ***	5.09 2.70 ***	5.19 2.78 ***	5.38 2.92 ***	5.45 2.96 ***
Prepare Taxes by Self on Computer	8.21 3.37 ***	8.22 3.39 ***	8.20 3.39 ***	8.28 3.44 ***	8.22 3.42 ***	8.46 3.58 ***	8.43 3.57 ***	8.43 3.57 ***
R ²	0.359	0.359	0.359	0.358	0.356	0.355	0.353	0.348
F-Statistic	5.23 ***	5.61 ***	6.03 ***	6.51 ***	7.06 ***	7.70 ***	8.45 ***	9.27 ***

Note: *** p < .01, ** p < .05, * p < .10, N = 166

Students that have student loans also have higher financial literacy score by 6.17 percentage points. This finding is not surprising since universities require students to take financial aid training in order to get a loan. If you maintain a GPA of 3.0 or above increases your score by 5.49 percentage points. Having a checking account increases the total knowledge score on average by 18.9 percentage points as compared to not having a checking account. Preparing your own taxes on-line increases your score by 8.21 percentage points. Balancing your checkbook frequency increases your score by 5.12 percentage points.

Model 8, is considered to have the best fit [$R^2 = .348$, ($F(9,156) = 9.27$, $p < .001$, $N = 166$)] and provides statistical support for the financial literacy construct illustrated in Figure 1. Evidence of support is measured by significant of variables that increase financial knowledge. Two of formal learning variables statistically increased financial knowledge—College Course in Personal Finance ($t = 7.63$, $p = .013$, $N = 166$) and College Seminar in Money Management/Investment ($t = 5.04$, $p = .014$, $N = 166$). Four of the experimental learning variables statistically increased financial knowledge—Student Loan Debt ($t = 5.94$, $p = .002$, $N = 166$), Having a Bank Account ($t = 19.09$, $p = .006$, $N = 166$), Frequency of Balancing Checkbook ($t = 5.45$, $p = .004$, $N = 166$), and Online Tax Filing ($t = 8.43$, $p < .001$, $N = 166$).

CONCLUSION

This article evaluates the current curriculum of financial education within the School of Business at Howard University. To facilitate this, students' socio-economic characteristics were examined in order to identify distinctive individuality that may impact their financial learning; JumpStart's financial literacy test as administered; and a regression model was estimated to capture key determinates of financial literacy knowledge. As compares to the national sample, the majority of HU students had higher expectation of pursuing an advanced degree and came more often from middle-income families that attended college. HU students' performance on the JumpStart financial literacy test was statistically no different from the average national-college student. However, there is room for improvement. Currently, the HUBS financial knowledge score is just above 60%, which is considered passing, but marginally. At a minimum, 70% should be the overall financial literacy score. The regression analysis identified experimental and formal learning activities having the greatest impact on financial literacy knowledge. In review, HU should continue with the seminars on Money Management/Investments and the Personal Finance and Personal Money Management courses. The regression analysis indicates that the courses are effective in increasing total financial knowledge. Unfortunately, seminars and courses are under-utilized or are offered too infrequently. To increase enrollment, a well planned marketing strategy is necessary. As a final point, this article serves a baseline that can be used to augment and evaluate the HUBS financial literacy curriculum over time.

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