

3-1-2013

Assessing the Financial Literacy of Domestic and International College Students

Jane Boyland

Johnson & Wales University - Providence, jboyland@jwu.edu

Rex Warren

Johnson & Wales University - Providence, RWarren@jwu.edu

Follow this and additional works at: http://scholarsarchive.jwu.edu/mba_student



Part of the [Education Commons](#), and the [Finance and Financial Management Commons](#)

Repository Citation

Boyland, Jane and Warren, Rex, "Assessing the Financial Literacy of Domestic and International College Students" (2013). *MBA Student Scholarship*. Paper 18.

http://scholarsarchive.jwu.edu/mba_student/18

This Research Paper is brought to you for free and open access by the The Alan Shawn Feinstein Graduate School at ScholarsArchive@JWU. It has been accepted for inclusion in MBA Student Scholarship by an authorized administrator of ScholarsArchive@JWU. For more information, please contact egearing@jwu.edu.

Assessing the Financial Literacy of Domestic and International College Students

Jane Boyland and Rex Warren

Johnson & Wales University

Authors Note

This paper is submitted in partial fulfillment of the course requirements for

RSCH 5500

Martin W. Sivula, PhD

Abstract

Improving student financial literacy has become a major goal of colleges and universities within the United States in recent years. Many schools are now instituting programs to increase student financial literacy in order to improve their students' later quality of life and decrease student loan default rates. The purpose of this study is to assess the current financial literacy of undergraduate students at a southern New England university in order to provide insights on how such a program could be customized to the unique needs of its student body. The Jump\$tart Survey was administered to 92 junior and senior students and the results were analyzed based on student knowledge of income, money management, saving, spending and credit. Significant differences concerning level of financial literacy between domestic and international students were noted, however, no significant difference gender based differences were detected. It is recommended that the colleges and universities tailor their financial literacy education program based on the cultural and ethnic differences among its student body.

Keywords: financial literacy, financial literacy education, Jump\$tart survey, college students

Assessing the Financial Literacy of Domestic and International College Students

Consumers' inability to make self-beneficial financial decisions in key areas relating to consumer financing can have negative ramifications on the entire economy (Mandell & Klein, 2009). The impact of this on the economy is so great that financial literacy has become a public policy objective of the Federal Government (Lusardi & Mitchell, 2007). College students, in particular have been identified as a population most in need of developing these crucial skills. With personal debt loads compounded by student loans students face very important challenges as they enter the workforce (Avard et al., 2005). This issue has become so important that many colleges and universities have identified financial literacy as a core outcome of their programs (Lusardi & Mitchell, 2007).

The purpose of this study is to measure the current level of financial literacy of students at a southern New England university. Further analysis is performed to determine if there are significant financial literacy knowledge gaps between its domestic and international student population. The information gathered from this study can be used to further customize a university's financial literacy education program according to the needs of its student body.

Literature Review

Financial literacy has been defined in various ways in the literature. These definitions vary in terms of their focus, but all reflect an emphasis that financial literacy is necessary to function in society (Bowen, 2002). In their research, Cude et al. (2006) outlined the specific activities that demonstrate financial literacy in their definition.

Personal financial literacy is the ability to read, analyze, manage and communicate about the personal financial conditions that affect material well-

being. It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future and respond competently to life events that affect every day financial decisions, including events in the general economy (Cude et al., 2006, p. 102).

The Jump\$tart Coalition's definition focused on outcomes. According to the Jump\$tart Coalition (2012); "Financial literacy is the ability to use knowledge and skills to manage financial resources effectively for lifetime financial security." Kim (2001) used an even broader definition "Financial literacy is a basic knowledge that people need in order to survive in a modern society". For the purposes of the research conducted in this study, the focus will be on the definition proposed by Cude et al. (2006) and students' degree of comfort and familiarization with various financial topics such as income, money management, savings, spending, and credit (Jump\$tart Coalition, 2012).

Low levels of financial literacy have been linked to high levels of personal and household debt (Lusardi & Tufano, 2009); poor health (Joo & Garman, 1998); adverse health choices (Peters et al., 2007); and inadequate retirement planning (Lusardi & Mitchell, 2007). It has also been found that individuals with lower financial literacy levels are more likely to have higher inflationary expectations which further exacerbate the negative social and economic consequences of poor financial literacy and lead to poorer general life outcomes (Bruine de bruin et al., 2010). Young people are very susceptible to the lifestyle aspirations of advertising and media and this is likely to increase reliance on debt (Fear & O'Brien, 2009).

Personal financial management is very important for college students. The average outstanding college student loan balance per borrower is \$23,300, and of the 37 million borrowers who have outstanding student loan balances as of third-quarter 2011, 14.4 percent, or

about 5.4 million borrowers, have at least one past due student loan account (Federal Reserve Bank Of New York, Research And Statistics Group, Microeconomic Studies, 2012). This is in addition to other consumer debt.

Since the 1990s, behavioral economics and behavioral finance theories have explored the cognitive biases that are likely to lead to poor financial choices. Such biases, it is argued, may be mitigated by financial literacy education (Cull & Whitten, 2011).

Creation of financial education programs designed specifically to enhance financial literacy have been viewed as a solution to alleviating financial problems that individuals face (Huston, 2010). However, the literature offers mixed evidence that education provides measurable benefits (Hung, Parker, & Yoong, 2009). One reason for this is the lack of a standard financial literacy measure (Huston, 2010). Hung, Parker, & Yoong (2009) also pointed out that surveys that have been designed to measure financial literacy such as the Jump\$tart Coalition Survey, the Washington Financial Literacy Survey, and the Survey of Consumer Finances do not collect sufficiently detailed information on individuals' financial education and variables related to financial decision making. In order to be effective, financial literacy education, therefore, should be tailored to suit different demographics, life stages, and learning styles (Huston, 2010).

Method

Population and Sample

The population for this study is college students enrolled in four-year programs in the United States. The latest data available indicate that there were 13.3 million students enrolled in the fall of 2010 in four-year institutions (National Center for Education Statistics, 2011). A

convenience sample of 92 students enrolled in a southern New England university in fall 2012 was used in this study.

Instruments and Data Collection

The entire sample was tested for financial literacy level using an established instrument - the Survey of Personal Financial Literacy, which has been administered annually since 1997 by the Jump\$tart Coalition for Personal Financial Literacy (Jump\$tart, 2012).

In a 2005 study, Thomas Lucey assessed the validity and reliability of this instrument (Lucey, 2005). The Lucey study compared internal consistency and between survey reliability and found the survey questions to have *p* values of between less than 0.01 and .939. Further, Lucey found facial validity to be high based on expert review and input, however the survey was determined to have a slight social bias (Lucey, 2005). The Lucey study is the only published study examining this survey instrument.

The survey instrument was partitioned into two sections. The first section contains 31 questions designed to test financial literacy, the second section includes 25 questions designed to categorize demographic and financial behavior.

The financial literacy questions within the survey were divided into four subject categories - income, money management, savings, and spending. A fifth category, credit, included responses from the other categories.

The survey was conducted on Wednesday, October 24 during three class periods that included Junior and Senior level students. Students were granted extra credit for completing the survey. All students present completed the survey.

Results

Table 1 shows the results of the survey in comparison to the results published from the February 2008 Jump\$start survey of 1030 students, which is the latest available.

Table 1

Comparison of percentage of correct responses on the Jump\$start Survey of Financial Literacy

Question Category	Study Survey (<i>n</i> =92)	Jump\$start Survey (<i>n</i> =1030)
Income	59.7	56.1
Money Management	44.8	40.9
Savings	49.2	43.2
Spending	54.3	50.8
Credit	48.4	44.1

The authors also tested two variables to determine if there was a statistical significance in survey correct response performance. Table 2 presents the results of the gender category variable, and Table 3 presents the results of the variable that categorized whether the student was international or domestic.

*Table 2**T-test of survey correct responses by gender*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>
Male	39	51.4%	15.3%
Female	52	53.7%	16.1%
Degrees of Freedom		89	
T Statistics		0.6881	
Two tailed distribution P level		.49318	
t Critical Value (5%)		1.98698	

There was not a significant effect for gender, $t(89) = .06881$, $p > .05$

*Table 3**T-test of survey correct responses by domestic or international student*

Variable	<i>n</i>	<i>M</i>	<i>SD</i>
Domestic	49	58.5%	15.2%
International	42	45.9%	13.6%
Degrees of Freedom		89	
T Statistics		4.19976	
Two tailed distribution P level		0.00009	
t Critical Value (5%)		1.98698	

There was a significant effect for type of student, $t(89) = .00009$, $p > .05$

We further examined the breakdown of scores within each section, to assist in determining which specific questions contributed to the score variations. This information will

be used to refine the curriculum to focus on those areas within each section that indicate a specific literacy challenge.

Table 4

Question score distributions of correct responses within the Income survey section.

Survey Section	Domestic (n=49)		International (n=43)		<i>t-test (a=.05)</i>		
	\bar{x}	<i>s</i>	\bar{x}	<i>s</i>	<i>t-value</i>	<i>df</i>	<i>Two tailed p</i>
Income	62.9%	21.4%	56.9%	20.0%	1.3894	89.627	0.1682
Money Management	53.5%	16.4%	36.4%	10.2%	6.0806	81.537	<.0001
Savings	49.6%	25.0%	49.1%	26.3%	0.0931	87.0973	.926
Spending	67.0%	22.6%	42.5%	18.1%	5.7679	89.2929	<.0001

The domestic and international student samples showed significant differences in money management and spending habits ($p<.0001$). The domestic and international student samples did not show significant differences in income and savings knowledge/habits ($p>.05$).

Discussion

The results of this survey indicate there is not a large difference in performance of the student sample and the 2008 sample of 1030 students on the Jump\$start survey. This confirms the need for the colleges and universities to pursue a program of improving the financial literacy of their students.

An analysis of two of the categorization variables indicated there was not a statistically significant difference based on gender, however there was a statistically significant difference based on whether the student was an international or domestic student. This issue is an important one for colleges to address, and we recommend further study to determine whether this performance difference is based on language barriers, or completely different cultural values and

experiences. In addition to financial knowledge and experience, it is recommended that colleges and universities consider the demographic, cultural and ethnic backgrounds of students when forming financial literacy mentoring groups.

References

- Avard, S., Manton, E., English, D., & Walker, J. (2005). The financial knowledge of college freshmen. *College Student Journal*, 39(2), 321–339.
- Borodich, S., Deplazes, S., Kardash, N., & Kovzik, A. (2010). Comparative analysis of the levels of financial literacy among students in the U.S., Belarus, and Japan. *Journal of Economics and Economic Education Research*, 11(3), 71–86.
- Bowen, Cathy F. (2002). Financial knowledge of teens and their parents. *Financial Counseling and Planning*, 13 (2), 93–102.
- Bruine de bruin, W., Vanderklaauw, W., Downs, J. S., Fischhoff, B., Topa, G., & Armantier, O. (2010). Expectations of inflation: The role of demographic variables, expectation formation, and financial literacy. *Journal of Consumer Affairs*, 44(2), 381–402.
doi:10.1111/j.1745-6606.2010.01174.x
- Chan, S. F., Chau, A. W.-L., & Chan, K. Y.-K. (2012). Financial knowledge and aptitudes: impacts on college students' financial well-being. *College Student Journal*, 46(1), 114–133.
- Cull, M., & Whitten, D. (2011). University students' financial literacy levels: Obstacles and aids. *The Economic and Labour Relations Review*, 22(1), 99–114.
- Cude, B., Lawrence, F., Lyons, A., Metzger, K., LeJeune, E., Marks, L. & Machtmes, K. (2006). College students and financial literacy: What they know and what we need to learn. *Proceedings of the Eastern Family Economics and Resource Management Association Conference*, 102-109.
- Fear, J. and O'Brien, J. (2009). Where does the buck stop? Community attitudes to over-lending and over-spending. *Australasian Accounting Business and Finance Journal*, 3(1), 3–12.

Federal Reserve Bank Of New York, Research And Statistics Group, Microeconomic Studies. (2012). *Quarterly report on household debt and credit, August 2012*.

Retrieved from

<http://www.newyorkfed.org/newsevents/news/research/2012/an120829.html>

Grable, J. S., & Bagwell, J. E. (2003). Credit card attitudes and behaviors of college students. *College Student Journal*, 37(3), 405-421.

Hanna, M., Hill, R. R., & Perdue, G. (2010). School of study and financial literacy. *Journal of Economics and Economic Education Research*, 11(3), 29–38.

Hayes, D. (2012). Higher education and financial literacy: a new paradigm. *Diverse: Issues in Higher Education*, 29(5), 8–9.

Hung, A., Parker, A., & Yoong, J. (2009). Defining and measuring financial literacy (WR-708). Washington DC: Rand Corporation. doi: 10.2139/ssrn.1498674

Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296–316. doi:10.1111/j.1745-6606.2010.01170.x

iGrad Financial Literacy for College Students (2012)

<http://www.igrad.com/FinancialLiteracyForCollegeStudents/?fl>

Johnson, E., & Sherraden, M. (2007). From financial literacy to financial capability among youth. *Journal of Sociology and Social Welfare*, 34(3), 119–147.

Joo, S. and Garman, E. (1998). Workers want more than retirement education at their workplace: A report of research findings. *Personal Finances and Worker Productivity*, 2(2), 156–161.

Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: the importance of parental socialization. *Family Relations*, 59(4), 465–478. doi:10.1111/j.1741-3729.2010.00616.x

Jump\$start Coalition for Personal Financial Literacy (2012). *Jump\$start coalition survey of personal financial literacy among students, College survey 2008*.
<http://www.jumpstart.org/survey.html>

Kim, J. (2001). Financial knowledge and subjective and objective financial well-being. *Consumer Interests Annual*, 47, 1–3. Retrieved from
http://www.consumerinterests.org/files/public/Kim-Financial_knowledge.pdf.

Lai, C.W. (2010). How financial attitudes and practices influence the impulsive buying behavior of college and university students. *Social Behavior and Personality: an International Journal*, 38(3), 373–380. doi:10.2224/sbp.2010.38.3.373

Lucey, T. a. (2005). Assessing the Reliability and Validity of the Jump\$start Survey of Financial Literacy. *Journal of Family and Economic Issues*, 26(2), 283–294.
doi:10.1007/s10834-005-3526-8

Lusardi, A. & Mitchell, O. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business Economics*, 42(1), 35–44.

Lusardi, A. and Tufano, P. (2009). Debt literacy, financial experiences, and overindebtedness. NBER Working Paper 14808, *National Bureau of Economic Research*, United States.
Retrieved from <http://www.nber.org/tmp/19952-w14808.pdf> .

Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning*, 20(1), 15–24.

National Center for Education Statistics (NCES), Institute for Education Sciences (2011). Table

199. Total fall enrollment in degree-granting institutions, by control and level of

institution: 1963 through 2010. Retrieved from

http://nces.ed.gov/programs/digest/d11/tables/dt11_199.asp

Norvilitis, J. M., & MacLean, M. G. (2010). The role of parents in college students' financial behaviors and attitudes. *Journal of Economic Psychology, 31*(1), 55–63.

doi:10.1016/j.joep.2009.10.003

Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M.

(2006). Personality factors, money attitudes, financial knowledge, and credit-card debt in college students. *Journal of Applied Social Psychology, 36*(6), 1395–1413.

Peters, E., Dieckmann, N., Dixon, A., Hibbard, J. H., & Mertz, C. K. (2007). Less is more in presenting quality information to consumers. *Medical Care Research and Review, 64*(2),

169–190. doi:10.1177/10775587070640020301