Financial Literacy Skills Among Latino/a College Students at UCI

Edgar Gamino

Department of Economics

Department of Chicano/Latino Studies

Dr. Michael Montoya

Abstract

Financial literacy describes the ability to effectively manage personal wealth and make informed financial decisions that benefit a person’s present and future well-being. Students’ level of literacy is tested through three important components of an online questionnaire: saving for short- and long-term goals, using credit responsibly, and successfully managing financial risks. This study examines financial literacy, comparatively, in a sample of 16 Latino/a UCI students v. 11 non-Latino/a UCI students. Statistical analysis suggests that “ethnic background” is a significant determinant of a student’s quiz score. On average, Latino students scored about 16% lower than their non-Latino counterparts. This study suggests that parents play an important role in their children’s financial knowledge, and that they are likely to be associated with these differences in test scores. To assess parents’ influence on scores, variables measuring *parents’ education level, parents’ English proficiency,* and *student-parent communication* were included in a statistical analysis. In the sample studied, Latino students have parents’ with the lowest levels of formal education, lowest English proficiency, and lowest student-parent communication. Results show that as parents’ education, parents’ fluency, and parent-student communication increase, so do students’ quiz scores. Thus, we can conclude that at least in part, parents are relevant in their child’s economic well being. In light of these findings, it is appropriate to direct some attention toward parents as vehicles of information for improving financial literacy rates in Latino and non-Latino communities.

Introduction

Insufficient knowledge of personal finance impairs consumers’ abilities to make decisions that favor individual and collective economic growth. Current trends of low financial literacy rates have negative implications for the individual consumer’s quality of life. It is difficult to ascertain a concrete definition of financial literacy; in this context, it describes the ability to effectively manage personal wealth and make informed financial decisions that benefit the consumer’s present and future well-being. A financially literate individual is able to: save for short- and long-term goals, use credit responsibly, and successfully manage financial risks. Incompetency in any of these areas can be financially harmful, and places consumers at risk of predatory lending and other unfair practices. Regrettably, past research largely identifies a pattern of low knowledge of financial concepts among consumers of all age groups.

A few factors described by Braunstein and Welch (2002) have prompted increased attention to financial literacy including: a rise in consumer debt levels, a decline in already low personal savings rates, and an increase in non-business bankruptcy filings. Major corporations target young borrowers, through personalized products like student credit cards, conceivably at ages when they are most susceptible to falling into debt. The ability to save, or lack thereof, affects quality of life more directly. Saving is central to accumulating wealth which may be used for retirement, home purchases, children’s college funds, vacations etc. Further, in a post mortgage-crisis climate, the need for improved consumer financial literacy is evident. Individuals with low levels of financial literacy are more likely to become victims of predatory lending. Certainly, improved financial knowledge can provide the tools to help combat predatory lending and offer other benefits as well.

In existing financial literacy studies, results overwhelmingly identify deficiencies in literacy rates. For instance, a study conducted by Haiyang Chen and Ronald P. Volpe (1998) found that college students scored a low 53% on a questionnaire measuring financial literacy. A similar study by Angela J. Murphy (2005) identified an even lower literacy rate at 30%. Research also suggests that minority students, on average, score lower in financial literacy than their white counterparts. Different from existing research, this study examines this deviation closely; particularly the Latino student community’s literacy rates vs. those of the non-Latino student community (at the University of California Irvine). Unfortunately, results from this study are not so different. In the current examination, Latinos scored lower, on average, than non-Latino students. These results suggest that the negative implications of low financial literacy are felt most by those individuals who are already underserved in our society.

Inadequate financial knowledge can be detrimental to the average consumer, consequently more to those who must deal with added obstacles. Latino communities face some of these obstacles, including language barriers and limited prior exposure to American financial systems. As a result, they generally score lower on financial literacy questionnaires than non-Latinos. Often these barriers prevent consumers from establishing beneficial banking relationships. Instead, many Latinos conduct basic transactions in alternative places (i.e. check cashing places) where they feel more comfortable (Braunstein & Welch 2002, p.447). However, alternative providers are inclined to have higher transaction fees and offer higher interest rates on loans. Again, these disservices affect those individuals who are already handicapped by low wages and high costs of living that tend to reduce quality of life.

In excess of improving quality of life for Latinos, improved financial literacy rates in Latino communities benefit non-Latino communities as well. For instance, major corporations have incentives to reduce rates of loan defaults. Low literacy rates (lower in Latino communities) indirectly raise interest rates for all populations by depreciating loan quality. To remain profitable, lenders must be compensated for acquiring risky loans. Because it is costly to distinguish good loans from bad loans, interest rates can be artificially high for all consumers. Furthermore, improving literacy rates promotes efficient functioning of financial markets. Braunstein and Welch (2002) describe “As knowledgeable consumers demand products that meet their short- and long-term financial needs, providers compete to create products having the characteristics that best respond to those demands” (p. 445). It is necessary then, to identify sources of deviation in literacy rates for Latinos to help improve literacy rates in all populations.

The current research examines financial literacy through three important parts: saving for short- and long-term goals, using credit responsibly, and successfully managing financial risks. To assess knowledge of financial topics, students were given an online questionnaire that included five questions from each of these three important parts along with a few demographic questions. Results suggest that differences in scores that emerge across ethnic groups are likely influenced by specific differences in parents’ educational attainment, parents’ English fluency, and parent-student communication. It is appropriate to observe the effects of these variables because in this sample, Latino parents had lower levels of education, lower levels of English fluency, and implicitly lower levels of student-Parent Communication (language barriers). Indeed, results illustrate that as parents’ education, parents’ fluency, and parent-student communication increase, so do students’ quiz scores.

Literature Review

Research on financial literacy lends itself to a methodology that is very similar across the existing scholarship. Most research studies, such as “An Analysis of Personal Financial Literacy Among College Students” by Haiyang Chen and Ronald P. Volpe (1998), use questionnaires to determine the level of financial literacy among their respective samples. The study conducted by Chen and Volpe (1998) administered a 52 question survey designed to cover the major aspects of personal finance (as defined by the two researchers): general knowledge, savings and borrowing, insurance, and investment (Chen & Volpe, 1998, p. 109). Mean scores ranging from 80% to 100% were classified as representative of a high level of financial knowledge, 60% to 79% represented a medium level, and scores below 60% represented a relatively low level of knowledge (Chen & Volpe, 1998, p. 109). Finally, the study used statistical methodology, including analysis of variance (ANOVA) and logistic regression models, to analyze the acquired data (Chen & Volpe, 1998, p. 110). This comprehensive set of methods is similar to what is used in this study.

 The results of the Chen and Volpe (1998) study identified a severe deficiency in financial knowledge among the college students tested. The overall mean score was 52.87%, indicating an overall low level of financial literacy (Chen & Volpe, 1998, p. 112). Chen & Volpe (1998) attribute the low scores to the absence of personal finance education courses in college curricula. In addition to inadequate financial programs, low average participant age was also found to contribute to the low literacy rates. As Chen & Volpe (1998) examine “At this stage of the cycle, they [college students] are exposed to a limited number of financial issues related to general knowledge, savings and borrowing, and insurance. During this period, most of their incomes are spent on consuming rather than investing” (p. 114). In effect, students “will score higher on issues with which they are familiar” (Chen & Volpe, 1998, p. 114). Including a demographic component in the questionnaire also allowed Chen and Volpe (1998) to draw comparisons among subgroups using variables like race, educational background, gender, income, class rank, and others. Significantly, for the purpose of this research design, the study found the variable “ethnic background” to be statistically significant. In short, foreign students earn lower scores than non-foreigners (Chen & Volpe, 1998, p. 114). Chen and Volpe (1998) conclude that students need to improve their knowledge of personal finance, and further that “There is a systematic lack of personal finance education in our education system. The lack of education has resulted in serious financial illiteracy found in the American Public” (p. 122).

In a similar study, Dr. Gregory P. Valentine and Dr. Mohammed Khayum (2005) from the University of Southern Indiana used much of the same methodology in search of differences between the financial literacy skills of students attending urban and rural high schools. In contrast to the Chen & Volpe (1998) study, participants chosen were high school students who were enrolled in economic courses (Khayum & Valentine, 2005, p. 3). Noteworthy in this study is the addition of an assessment of the impact of economic socialization on financial literacy and student test scores. This qualitative analysis included questions about participants’: family background, involvement in financial decision making, educational aspirations, estimated family income, number of business courses completed, and other demographic questions (Khayum & Valentine, 1998, p. 3). The analysis indicated that the variables of family income and the educational background of the students’ parents were statistically significant of the student’s performance on the quiz. The study also found what seems to be consistent across financial literacy studies: a low level of financial knowledge characterized both groups of students. No significant differences were observable across school types (urban/rural schools). The overall level of financial literacy of the entire sample was 51%; students in urban schools scored 51% and students in rural schools scored 50% (Khayum & Valentine, 2008, p. 13).

In the previous studies, ethnic background is not given much importance and instead is one of many comparisons conducted by researchers. This research differs in its treatment of the issue of ethnic background; it makes it the main point of comparison. While the Chen & Volpe (1998) study includes a *race* indicator, their sample contains a very low proportion of minority students and therefore cannot be taken as representative of a larger population. Khayum & Valentine’s (2005) methods provide a stronger attempt to determine causality by including financially relevant demographic questions. It is this thoroughness that led to the inclusion of an important question in the current research: How often do you speak to your parents about financial topics? This question provides a link between the parents’ education level and the student’s performance on the quiz. In other words, having more educated parents does not necessarily mean that knowledge is transmitted to the student. This question gives insight, if only minimally, to communication between the student and parent.

In an effort to raise overall literacy rates, some studies advocate the institution of finance courses into the basic curricula of high schools and Colleges (Chen & Volpe, 1998). In the article titled “The Impact of Financial Literacy Education on Subsequent Financial Behavior,” Lewis Mandell and Linda Schmid Klein (1997) put this proposed solution to the test. The study uses a sample comprised of 79 high school seniors; 39 of these students were selected to have taken a course in financial management one to four years earlier, while the remaining 40 did not (Klein & Mandell, 1997, p.18). The participants received a questionnaire much like those used in the afore mentioned studies. Interestingly, no difference was found in the mean scores of those who had taken the financial courses from those who had not. The overall average score was 69.3%; students who had taken the course achieved scores of 68.7% and surprisingly those who had not scored slightly higher at 69.9%. These results suggest directing attention toward different sources for the improvement of financial literacy. Most researchers conform to the addition of finance courses, and thus few propose different solutions. Khayum & Valentine (2005) identify parental education as a significant indicator of quiz score, but fail to mention the parents as part of a solution. In contrast, this research suggests educating parents in matters of finance as a means of closing the ethnic background gap, and further improving literacy rates overall.

Methodology

This study employs an online questionnaire that is designed to assess participants’ knowledge of important aspects of personal finance. Accordingly, quiz questions are in the form of a multiple choice test using some questions gathered from pre-existing organizations, like the JumpStart Coalition, and some developed specifically for this study. The quiz is composed of two main sections: *About You* & *Financial Literacy Quiz.* The quantitative portion (the actual quiz), is split into three components: money management, saving for long term goals (I.e. buying a home), and credit assessment. Each section consists of five questions that evaluate the student’s knowledge in each respective component. This section is graded on a 0-100 scale, with 100 being the maximum points possible. Nine qualitative questions (*About You* Section), are included to account for those factors that cannot be reflected in the quantitative portion. Questions in this section ask participants about their ethnic background, parent’s highest level of education completed, and other similar variables. These demographics allow us to draw meaningful comparisons across subgroups of interest (i.e. low communication vs. high communication). These further serve as possible explanations of why differences occur across populations. To determine whether they explain any variation in quiz scores, variables are analyzed by comparing calculated averages as well as by linear regression.

Linear regression analysis is used to assess the influence of different variables on student quiz scores in this study. Put simply, linear regression attempts to identify correlations between dependent and independent variables in order to estimate the equation of a line that best fits the acquired data set. For simplification, all of the independent variables are converted into binaries that take on a value of one if that characteristic is present. For instance, a one in the variable DLATINO suggests that the participant is Latino, and zero indicates otherwise (participant is non-Latino, including White, Asian, etc.). Other variables constituting the estimated linear model included: DDADHIGHED, DMOMHIGHED, DMOMENG, DDADENG, and DPARCOMM (note: variables will be defined individually in later sections). In assessing the impact of each of these variables, T-statistics are calculated individually and evaluated using three confidence intervals commonly used in statistics: the 90%, 95% and 99% confidence intervals. Finally, an R-squared coefficient (used in describing variation) is used to determine the validity of each of the regressed linear models. The R-squared ranges from zero to one, where values close to zero describe a poor fit and values close to one describe a good fit, with strong relationships between the variables. At any rate, our small sample of students (27) is partially responsible for a trend of overall lower values of R-squared. Accordingly, different measures are taken to avoid dismissing valuable information from our models.

In order to capture the effects of “ethnic background” on students’ quiz score, the sample consists of two student populations, namely Latino students vs. non-Latino students. Data is collected from a sample of 27 University of California Irvine students. Roughly 60% are Latino, and the remaining 40% are non-Latino. While the samples are disproportionate, no scores were omitted to ensure the highest possible sample size for each population group. This non-Latino population serves primarily as a reference point, for our population of interest, the Latino student community.

A total of 43 emails were sent directly to students containing a link to the online Financial Literacy Quiz (http://is-nri.com/take?i=156781&h=nt7r\_0WVGUVcW-MKH8VQhw). In addition, this same email was distributed to the entire Social Science mailing list, 76 flyers were handed out at computer labs across campus, and personal invitations were sent to students in the Chicano/Latino Studies department. To ensure a problem-free survey, feedback was collected from each participant to rid the test of any unclear directions or sections contained in the quiz

 Existing studies suggest that students of color are generally less financially informed than their white counterparts (Chen & Volpe 112). This study converges on two central comparisons designed to examine this relationship. First, it compares test scores across the independent variable of “ethnic background”. Statistical analysis determines whether the proposed null hypothesis (that Latinos score the same as non-Latinos) should be rejected. After collecting test scores for each population, the expected value for each population’s test scores is determined. To make this test more accurate, a much larger sample is necessary; however primarily because of time constraints, a small sample will suffice. Once the population means are determined, for the hypothesis of lower mean scores for the Latino college community vs. the non-Latino college community, the test is setup as follows:

**Hypothesis 1:**

**(Null) Hο: μ(Latino) - μ(non-Latino) = 0**

**(Alternative) H1: μ(Latino) - μ(non-Latino) < 0**

Second, for the hypothesis of higher parental education leading to higher scores, the populations to be compared are arbitrarily divided at the middle. *No schooling, grade school, and some high school* are indicative of low educational level. *High school graduate, some college, and college graduate* are representative of high levels of parents’ educational attainment. The test is set up as follows (where *parent high* represents high levels of parental education and *parent low* represents low levels of parental education):

**Hypothesis 2:**

 **(Null) Hο: μ(parent low) - μ(parent high) = 0**

 **(Alternative) H1: μ(parent low) - μ(parent high) < 0**

Next, a T-statistic is set up to determine whether the Null can be accepted or rejected (at any of three significance levels including: 90%, 95% and 99%). For the first test, if the null is rejected, this indicates that there is enough statistical evidence to show that the mean of Latino college student test scores is lower than the mean of the non-Latino college population. For the second hypothesis, if the null is rejected, we have enough statistical data to show that the mean of students whose parents have lower levels of education is lower than the mean for students whose parents have higher levels of education. These scores are compared against their respective qualitative questions, and in this manner data collected can be accurately analyzed. For instance, we can associate a low or high parental education level to each ethnic background. If in fact Latinos score lower than non-Latinos, and they also have a low parental education level, this maybe one possible explanation as to why Latinos are scoring lower. However, while the factors collected in the qualitative component can attempt to explain any existing relationships, it would not be possible to attribute these as causation. Finally, following the example of previous research conducted on financial literacy, data analysis is conducted using statistical analysis software (in this case Eviews 6).

Results

Results of the financial data do not deviate from preexisting patterns found in the literature. This is due, in part, to a well constructed research design that has been replicated in a variety of settings. Moreover, many of these studies exhibit not only internal validity, but also external validity, something that this study attempts to do. In other words, the reliability of the study allows the researcher to use his/her own model to extrapolate and provide significant estimates for populations outside of the immediate sample. Although a majority of the findings from this study are consistent with the results of prior studies, that is, that students of color‒in this case Latinos‒ typically are outscored by their peers, the included demographic questions illumi­­nate what may be a few explanatory variables underlying this difference.

 On average, UC Irvine students differ favorably from the existing deficiency in financial literacy rates. The mean score in the quiz for the entire sample was a 78%. Using Chen and Volpe’s (1998) scale of financial knowledge, the students fall into a medium proficiency, and are just below the level required for a good understanding of financial concepts (Good Finance Knowledge = 79%). These results differ from previous studies that generally identify levels in the 50s and 60s (low financial literacy). Students performed best in the *Money Management* portion of the questionnaire (87%), and worst in *Saving for short- and long-term goals* (63%). Their knowledge of *Credit Risk* was also above expected at 84%. In spite of financial literacy rates being acceptable for the entire sample, as a sub group, Latinos scored substantially less than their non-Latino counterparts.

One of the primary ambitions of this research was to examine the effect of ethnic background on students’ quiz scores. In order to test the hypothesis that Latinos score lower than non-Latinos in financial literacy exams, a regression analysis was performed initially using only the DLATINO variable (excluding other components). Linear regression analysis provides evidence that supports this first hypothesis. When regressing using data on only ethnic background, the estimated coefficient (β) for DLATINO was -2.36. The model suggests that on average, Latinos can expect to score approximately 16% below their non-Latino peers. A p-value of 0.0004 on the coefficient of DLATINO reveals that this difference is statistically significant at the 90%, 95% and 99% levels. Roughly 34% of the variation in quiz score can be explained by the variable DLATINO (R-squared = 0.34). Although this suggests that other variables are also responsible for deviations in quiz scores (as expected), the variable of ethnic background proved to be highly influential.

Research indicates that minorities are outscored by whites in financial literacy tests; these results are no exception. Overall, non-Latinos achieved a mean score of 13.18, out of a possible 15, versus a mean score of 10.81 by Latinos. What is more, Latinos suffered lower rates in each of the three categories with mean scores of: Money Management 4.06, Saving for short- and long-term goals 2.81, and Credit Assessment 3.93. Non-Latinos on the other hand, scored the following: Money Management 4.81, Saving for short- and long-term goals 3.72, and Credit Assessment 4.63. Strikingly, without averaging the total sum of quiz scores, Non-Latinos ascend to the “Good Financial Literacy” category with a score of 88% while Latinos remain in the medium category with a 72% average quiz score. It is difficult to identify which variables may be causing this inequity. Based on findings from Khayum & Valentine’s (2005) research, it was necessary to investigate the parents’ level of education as one possible causal mechanism.

 Higher parent’s education level has been found to be advantageous for students in numerous applications. For instance, students whose parents attended college, are more likely to attend college themselves. Regarding financial literacy, more educated parents are generally more prosperous. Thus it is likely that these parents are familiar with a larger variety of financial products including: stocks, retirement funds, certificates of deposit and the like. Parents from lower socioeconomic backgrounds often live paycheck to paycheck, and as a result find little interest in products that require locking money away for large periods of time. It isn’t a long shot then, to deduce that students whose parents are more educated will be exposed to a wider and more comprehensive set of financial information. Interestingly, the sample studied reveals that Latino parents overwhelmingly received less formal education than non-Latino parents. In the Latino sample, 44% of students had two parents with low education (No Schooling, Grade School, Some High School), 37% had at least one parent with high education (High School Graduate, Some College, College Graduate), and only 19% had both parents with high education. In contrast, 9% of non-Latino students had two parents with low education, 9% had at least one parent with high education, and 82% had two parents with high education. These results pointed to a significant difference that was likely to affect students’ performance on the literacy quiz.

In spite of what appeared to be a highly significant association, results of a regression of the variables high and low education (DMOMHIGHED & DDADHIGHED) on quiz scores were inconclusive. The coefficients of each variable indicated small difference in score (.37 and .13). But, their T-Statistics are small and thus they are not statistically significant at the 90%, 95% or 99% confidence intervals. However, when simply comparing the mean scores of students whose parents have high education versus students whose parents have low education, a difference of 6% is observable. For the current analysis, in the hypothesis testing the null that there is no significant difference between students whose parents have high education versus those whose parents have low education, the null cannot be rejected. In other words, it is possible that parental education does not affect a student’s financial literacy rate. In fact, for Credit Assessment, students’ whose parents had no education achieved the highest score of 92%. This may be a result of the relationship between education and income. Higher education is correlated with higher income, thus it is likely that wealthier students do not have to incur debt forced on their less privileged counterparts. If this is the case they will be less knowledgeable in this area. Conversely, students from low income households may be forced to take on debt, and as a result be more knowledgeable in the assessment of credit. Considering the observed difference between the groups of interest however, it seems unlikely that parents’ education is not correlated with quiz score and warrants further examination (perhaps beyond the scope of this study).

Results indicating that parents’ education level is not statistically significant, at least in the linear regression, do not dismiss the possibility of parents influencing Latinos’ lower test scores in other ways. A second variable introduced into the linear model, denoted DMOMENG & DDADENG, captures the effect of parents’ English fluency skills and its influence on literacy rates. English proficiency helps parents transmit information to their children more easily. More importantly, financial terms can be especially hard to translate. As a result, non-English speakers will find it difficult to stay informed about financial products. Even if parents are properly informed, relaying this information to the child is just one more obstacle that hinders transmission of financial knowledge. Again, for this variable, Latinos disproportionately had parents whose English was less than fluent. In the sample, approximately 33% of Latino students had two parents that spoke the language fluently. The findings suggest a positive correlation between these variables of fluency and quiz scores. Interestingly, there exists a gradient effect such that both parents fluent corresponds to the highest mean of test score (82%), one parent fluent corresponds to the middle of mean score (77%), and no parents fluent corresponds to the lowest mean score (75%). Though results from DDADENG and DMOMENG are suggestive of increased quiz score, they do not explain how the information is transmitted from parent to student. To provide this missing link, a variable DPARCOMM (Communication with parents) was included in the analysis.

Well equipped, financially wise parents are not relevant in literacy quiz scores unless they are able to communicate their knowledge to their student. The DPARCOMM variable measured students’ perceptions of communication with their parents. If students spoke to their parents “never” or “sometimes”, they were placed in the low-communication category. “Often” or “Very Often” were conversely labeled high in communication. 63% of students fell into the low-communication category, and the rest into high communication. Results show that students who communicated at higher rates with their parents scored on average 5% better than their counterparts. Yet, in the linear analysis, results for this variable were also inconclusive. Because the linear analysis is greatly affected by the small sample, the difference in mean scores between these two subgroups cannot be dismissed.

A final regression was performed using data from all variables possibly associated with parents’ influence on scores. The model increased in its estimating power with an R-squared of .44. The only variable found to be statistically significant, again at the 90%, 95% and 99% confidence intervals, was DLATINO. It is likely that this coefficient is overpowering the rest, and thus explains most of the variation itself. Nevertheless, the remaining variables must be accounted for, as they explain some of the variation. Without including these, the linear model suffers from Omitted Variable Bias. This means that there are excluded independent variables (X) that have some effect on the dependent variable (Y), which may lead to wrong conclusions.

A review of the data is presented in the appendix I. While these charts are not necessary for understanding the results of the research, they do summarize the data in a simple and comprehensive manner.

Discussions

The data collected disclose several variables that may be partially responsible for lower scores. Results suggest that all three measures of parent involvement in the students’ performance, exhibit a positive association with quiz score. That is, as parents’ education, parents’ fluency, and parent-student communication increase, so do students’ quiz scores. Though, results of the regression on these variables were inconclusive, it still isn’t difficult to appreciate the role of the parent in a student’s knowledge of finance.

The increased attention of parental involvement is one facet that distinguishes this study from those preceding it. Further research in this area is necessary, but will likely achieve similar results. The interpretation of results must be done in a careful manner for this study. A small sample typically decreases the validity of any research design. With this in mind, the findings do, in many ways, coincide with prior research in the area. First, Latinos were found to score lower than non-Latinos. Second, higher parents’ level of education was found to be correlated with higher quiz scores. It is likely that if this quiz was administered to 2,700 rather than 27 students, these same trends would appear. Caution must also be exercised in extrapolating these results to other Latino populations. Because Latinos are a minority within the college campus, it is dangerous to generalize these results even to Latinos of the same age group, as most will not be college students. An examination of financial literacy rates outside of the college community will likely result in more heavily pronounced disparities.

Another drawback of this study lies in the possibility that errors in sampling may have impacted these outcomes. Most Latino participants were reached through email communication, whereas non-Latino participants were mainly gathered in computer labs. This wasn’t done purposely; because Latinos are a minority on campus, they were less likely to be at computer labs (less likely to be anywhere for that matter). Now, those students who spend time regularly at computer labs are expected to be especially akin to technology. Braunstein and Welch (2002) examine “Over the past decade, technological advances have transformed nearly every aspect of marketing, delivery, and processing of financial products and services” (p. 445). This implies that students used in the non-Latino sample may have had an unfair advantage over Latinos. In order to correct for this, future studies may wish to include samples of Latinos found in computer labs, or omit these samples all together. Due to limitations of time and resources, this was the only sample available for analysis.

Conclusion

Low Financial literacy rates can be economically damaging at the micro and macro levels. Understanding the consequences of low literacy rates on consumers’ daily lives‒in itself‒provides enough incentive to warrant immediate changes in financial education. Aside from affecting the lives of those individuals that are less financially informed, low knowledge reduces efficiency in financial markets. Consumers may lose the benefit of new products that would otherwise be created through innovation in an efficient market. Results of this study provide some reassurance however. Collectively, UC Irvine students scored an average of 78% which places them at medium-proficiency. In fact, even across subgroup comparisons, neither group fell into the low-proficiency category. Without averaging, non-Latino students actually exhibited high levels of proficiency while Latino students lagged behind. It is this last issue that must be addressed.

In accordance with past financial research, results demonstrate differences across ethnic backgrounds. High rates of literacy produced in these results are likely inflated because of selective sampling from a university. Differences in scores are increasingly pronounced outside of the college campus, where greater differences exist across our populations of interest. It is important to note that ethnic background is not the causal mechanism of lower quiz scores. Rather, the lower scores can be attributed to factors that diverge within those populations; in this study the divergent factors are parents’ education level, English fluency, and parent-student communication. What is more, these factors are not characteristic of particular backgrounds or cultures. Instead, they exist largely due to continuing immigration patterns (i.e. English fluency) and low socioeconomic conditions prevalent in Latino communities.

 As expected, parents are relevant to students’ economic well being. This is evident in all three comparisons that tested for the influence of parents including: parents’ educational attainment, parents’ English fluency, and parent-student communication. The highest observable difference existed in the ability of parents to speak English. Students who had two parents with English fluency scored 6% higher than students with no parents English fluent. Because Latino students had parents with the least English proficiency, they found themselves most affected by this factor. Similarly, Latino parents had the lowest levels of education which were also suggestive of lower quiz scores for their students. These findings confirm the inextricable link between parents and their students quiz scores.

 What makes this research compelling is that financial literacy rates can be increased by educational programs. Different educational programs have already been implemented with mixed results. One example, described in the literature, (like many others) proved to be ineffective in assisting students to achieve better scores through a financial program. Other solutions similarly target the students themselves in hopes of promoting better rates of literacy. In light of these findings, it is appropriate to shift some attention to the possibility of educating students’ parents on financial concepts. Further, parents should be encouraged to communicate at greater amounts with their children. Ultimately, increasing financial literacy not only benefits balance sheets of big corporations, but these small measures can help improve the quality of life of Latinos and non-Latinos alike. In a mutually dependent relationship, the whole economic structure can benefit from progressively financially wise individuals. It is to our benefit to educate all consumers, regardless of ethnic background; and more importantly to our detriment to allow anyone to lag behind.

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Appendix I

Mean Scores Across Groups

*Latinos v. Non-Latinos*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **S1: Money Management** | **S2: Saving Short/Long Term** | **S3: Credit Assessment** | **Overall Quiz** |
| **Latinos** | **81%** | **56%** | **78%** | **72%** |
| **Non Latinos** | **96%** | **74%** | **92%** | **88%** |

*High v. Low Parental Education Level*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **S1: Money Management** | **S2: Saving Short/Long Term** | **S3: Credit Assessment** | **Overall Quiz** |
| **No Parents High Education** | **80%** | **62%** | **92%** | **78%** |
| **1 Parent High Education** | **83%** | **60%** | **80%** | **74%** |
| **2 Parents High Education** | **95%** | **66%** | **81%** | **81%** |

*Low v. High Parent English Fluency*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **S1: Money Management** | **S2: Saving Short/Long Term** | **S3: Credit Assessment** | **Overall Quiz** |
| **No Parents Fluent** | **80%** | **60%** | **85%** | **75%** |
| **1 Parent Fluent** | **85%** | **60%** | **85%** | **77%** |
| **2 Parents Fluent** | **93%** | **68%** | **83%** | **81%** |

*Low v. High Parent Communication*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **S1: Money Management** | **S2: Saving Short/Long Term** | **S3: Credit Assessment** | **Overall Quiz** |
| **Low Communication** | **85%** | **61%** | **82%** | **76%** |
| **High Communication** | **92%** | **66%** | **86%** | **81%** |

 Appendix II

**Financial Literacy Quiz**

Thank you for your participation. The following survey is intended to measure the level of financial literacy among college students, and identify any disparities that may result from differences in ethnic backgrounds (specifically the Latino and Non-Latino college communities). Note, your participation is voluntary and is greatly appreciated.

**Financial Literacy** is the ability to effectively manage personal wealth and make informed financial decisions (i.e. borrowing, buying a home, etc.) that may benefit you now and in the future. A financially literate individual is able to: save for short- and long-term goals, use credit responsibly, and successfully manage financial risks.

*Classification Questions*

1. Ethnic Background:
	1. White
	2. Hispanic/Latino
	3. African-American
	4. American Indian
	5. Asian
	6. Native Hawaiian or other Pacific Islander
	7. Other
2. Grade Level:
	1. Freshman
	2. Sophomore
	3. Junior
	4. Senior
3. Mother’s highest educational level:
	1. Grade School
	2. Some High School
	3. High School graduate
	4. Some college
	5. College graduate
	6. No Schooling
	7. Don’t know/ Not applicable
4. Father’s highest educational level:
	1. Grade School
	2. Some High School
	3. High School graduate
	4. Some college
	5. College graduate
	6. No Schooling
	7. Don’t know/ Not applicable
5. Gender:
	1. Male
	2. Female
6. Can your parents speak English Fluently?
	1. Yes
	2. No
	3. Adequate (some trouble)
7. How often do you speak to your parents about financial topics? (I.e. Investments, planning for the future, the importance of record keeping, budgeting etc.)
	1. Not at all
	2. Sometimes
	3. Often
	4. Very Often
8. How would you assess your own financial literacy?
	1. Poor
	2. Somewhat poor
	3. Good
	4. Very Good

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*Section 1: Money Management*

1. Rebecca has saved $12,000 for her college expenses by working part-time. Her plan is to start college next year and she needs all of the money she saved. Which of the following is the safest place for her college money?
	1. **Locked in her closet at home.**
	2. **Stocks.**
	3. **Corporate bonds.**
	4. **A bank savings account.**
2. Under which of the following circumstances would it be financially beneficial to you to borrow money to buy something now and repay it with future income?
	1. **When you need to buy a car to get a much better paying job.**
	2. **When you really need a week vacation.**
	3. **When some clothes you like go on sale.**
	4. **When the interest on the loan is greater than the interest you get on your savings.**
3. Which of the following instruments is NOT typically associated with spending?
4. **Debit card.**
5. **Certificate of deposit.**
6. **Cash.**
7. **Credit card.**
8. Many people put aside money to take care of unexpected expenses. If Juan and Elva have money put aside for emergencies, in which of the following forms would it be of LEAST benefit to them if they needed it right away?
	1. **Invested in a down payment on the house.**
	2. **Checking account.**
	3. **Stocks.**
	4. **Savings account.**
9. True or false: Only professional tax preparers are allowed to file your income taxes each year.
	1. **True**
	2. **False**

*Section 2: Saving For Long Term*

1. David just found a job with a take-home pay of $2,000 per month. He must pay $900 for rent and $150 for groceries each month. He also spends $250 per month on transportation. If he budgets $100 each month for clothing, $200 for restaurants and $250 for everything else, how long will it take him to accumulate savings of $600.
2. **3 months.**
3. **4 months.**
4. **1 month.**
5. **2 months.**
6. Sara and Joshua just had a baby. They received money as baby gifts and want to put it away for the baby’s education. Which of the following tends to have the highest growth over periods of time as long as 18 years?
7. **A checking account.**
8. **Stocks.**
9. **A U.S. Govt. savings bond.**
10. **A savings account.**
11. Antonio has just received $5,000.00 for his birthday but does not plan to use it until the following year. Which of the following accounts will yield a return on Antonio’s money?
12. **Checking**
13. **Official Check**
14. **Certificate of Deposit**
15. **Credit Card**
16. When might it be a bad idea to place money in a Certificate of Deposit?
17. **When quick access to money is needed, if money is withdrawn a bank fee may be assessed.**
18. **When money is not needed and will otherwise be kept under the mattress.**
19. **When you would like to receive some return on your initial deposit.**
20. **When your personal banker is looking out for your interests, and is genuinely helpful.**

1. Rob and Mary are the same age. At age 25 Mary began saving $2,000 a year while Rob saved nothing. At age 50, Rob realized that he needed money for retirement and started saving $4,000 per year while Mary kept saving her $2,000. Now they are both 75 years old. Who has the most money in his or her retirement account?
2. **They would each have the same amount because they put away exactly the same**
3. **Rob, because he saved more each year**
4. **Mary, because she has put away more money**
5. **Mary, because her money has grown for a longer time at compound interest**

*Section 3: Credit Assessment*

* + 1. Which of the following statements best describes your right to check your credit history for accuracy?
1. **Your credit record can be checked once a year for free.**
2. **You cannot see your credit record.**
3. **All credit records are the property of the U.S. Government and access is only available to the FBI and Lenders.**
4. **You can only check your record for free if you are turned down for credit based on a credit report.**
	* 1. If you are behind on your debt payments and go to a responsible credit counseling service such as the Consumer Credit Counseling Services, what help can they give you?
5. **They can cancel and cut up all of your credit cards without your permission.**
6. **They can get the federal government to apply your income taxes to pay off your debts.**
7. **They can work with those who loaned you money to set up a payment schedule that you can meet.**
8. **They can force those who loaned you money to forgive all your debts.**
9. Scott and Eric are young men. Each has a good credit history. They work at the same company and make approximately the same salary. Scott has borrowed $6,000 to take a foreign vacation. Eric has borrowed $6,000 to buy a car. Who is likely to pay the lowest finance charge?
10. **Eric will pay less because the car is collateral for the loan.**
11. **They will both pay the same because the rate is set by law.**
12. **Scott will pay less because people who travel overseas are better risks.**
13. **They will both pay the same because they have almost identical financial backgrounds.**
14. Which of the following credit card users is likely to pay the GREATEST dollar amount in finance charges per year, if they all charge the same amount per year on their cards?
15. **Jessica, who pays at least the minimum amount each month and more, when she has the money.**
16. **Vera, who generally pays off her credit card in full but, occasionally, will pay the minimum when she is short of cash**
17. **Megan, who always pays off her credit card bill in full shortly after she receives it.**
18. **Erin, who only pays the minimum amount each month.**
19. Which of the following statements is true?
20. **Banks and other lenders share the credit history of their borrowers with each other and are likely to know of any loan payments that you have missed.**
21. **People have so many loans it is very unlikely that one bank will know your history with another bank**
22. **Your bad loan payment record with one bank will not be considered if you apply to another bank for a loan.**
23. **If you missed a payment more than 2 years ago, it cannot be considered in a loan decision.**