Young Adult Financial Literacy and Its Underlying Factors

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This research was conducted by requirements set by the Honors Program at the college.

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Abstract

This thesis discusses the current state of financial education and young adult financial literacy in the United States. Financial literacy is the level of personal finance knowledge an individual requires to make beneficial financial decisions. The United States faces a financial literacy crisis in young adults evidenced by failing scores of assessments administered by the Jump$tart Coalition, a leader in researching financial literacy in young adults. This thesis presents research and analysis of personal finance assessment scores from students of Franklin High School, Massachusetts. Assessments were administered to personal finance, business, and history students. The majority of students failed the assessment, and this thesis explores possible factors explaining why.

Keywords: financial literacy, personal finance education

Young Adult Financial Literacy and Its Underlying Factors

By entering five numbers into a calculator, I know exactly how much money to invest in the market to be a millionaire by retirement. However, the Certified Financial Board of Standards (2015) revealed four in ten Americans use a financial planner and pay thousands of dollars for their retirement planning services. People often shove financial education to the side, believing it is too complex for them to understand. However, it is unnecessary to outsource financial knowledge, and far more powerful to make financial decisions ourselves.

Financial literacy is the term for individuals who are well-versed in finance and can make beneficial financial decisions for themselves. Once financially literate, the knowledge can be applied to any financial situation, including choosing among mortgage loans or investments, or knowing how long it will take an investment to grow. We face financial decisions throughout life. Educating high school students in finance can give them a well-informed starting point for their financial choices throughout their adult lives. This thesis seeks to assess the financial literacy of three groups of students in Franklin High School in Massachusetts, and to illuminate factors behind the levels of financial literacy among the high school students.

Literature Review

This literature review addresses the current status of financial literacy in young adults, formal finance education initiatives in U.S. schools, as well as the obstacles and possible solutions for effective finance education in schools.

Assessment of the Financial Literacy in Young Adults

Research done by Lewis Mandell for the National Jump$tart Coalition for Personal Financial Literacy is popular research in the financial literacy field as it is referenced by many other studies. The coalition has administered biannual financial literacy assessments of high school seniors and full-time college students since 1997, which served as baseline results for future comparisons. The four aspects of Jump$tart's personal finance standards assessed in the survey are: income, money management, saving and investing, and spending and credit (Mandell, 2009). Over 6,800 high school seniors across the United States responded to the thirty-one question survey, revealing the lowest average score in the survey's history, 48.3% (Mandell, 2008). While the coalition hoped to see an average of a 60% (passing score) since the baseline survey, scores dropped 10% (Mandell, 2008). In contrast, the 1,030 full-time college students completing the same assessment as the seniors averaged a passing score of 62.2% (Mandell, 2009). Most college students graduate as financially literate, presenting an alarming situation for the nearly three-quarters of Americans who do not graduate from college (Mandell, 2009).

Young adults are at a disadvantage to develop financial literacy because they have less opportunities to practice financial behaviors. Cude and Henager studied the relationship between financial literacy and financial behaviors (long- and short-term) with age (2016). In the study, eighteen to twenty-four years old correspond to young adults. The long-term behaviors included if respondents evaluated their retirement needs, had a retirement plan, and if they had any investments or securities outside of their retirement accounts (Cude & Henager, 2016). The short-term behaviors were if respondents had an emergency savings fund, spent less than or equal to their income, and if they overdrew their checking account occasionally (Cude & Henager, 2016). The data revealed the older people were, the more likely they are to engage in long-term behaviors and have more financial knowledge (Cude & Henager, 2016). In the case of short-term behaviors, the oldest age group were 78% more likely to engage in one or more of the long-term behaviors than the young adult group (Cude & Henager, 2016). Overall, Cude and Henager concluded that financial literacy is positively associated with the long- and short-term financial behaviors (2016). With financial literacy, people can apply their knowledge into their behavior. Because young adults are likely to live with their families and have less financial responsibility, they may not feel an immediate need to engage in these financial behaviors or have the need to act upon their financial knowledge.

Financial Education in the United States Today

Financial literacy programs are established through integration or separation. Integration refers to financial education incorporated into a pre-existing course at a school, while separation refers to a finance course completely independent from other courses. National and state level initiatives have been implemented to integrate financial education into schools (Maloney, 2010). National initiatives include the United States Department of the Treasury White Paper and Fair and Accurate Credit Transaction (FACT) Act's Financial Literacy and Education Commission (Maloney, 2010). The Treasury Department promoted integration of financial curriculum into required reading and mathematics courses so finance can be reinforced every year (Maloney, 2010). The FACT Act's commission supported integration because it reduces the concern for finance education to be cut from budgetary constraints (Maloney, 2010). The Council of Economic Education reported that twenty-one states require personal finance education to be done by integration in classes such as economics, mathematics, and social studies (Maloney, 2010). States create the majority of their curriculum, and are not required to include financial education in their content standards, leaving the task of financial education to states (Maloney, 2010).

Obstacles for Financial Literacy and Education

Many have noted the recent trends of low financial literacy in young adults, but some obstacles exist outside of educators' controls like household income and race ("Financial Literacy Declines Among High School Seniors", 2008). James Moten analyzed the relationship between household income and ethnicity with financial literacy in high school students. Through a statistical test, Moten established that there was a significant effect from ethnicity on financial literacy regardless of household income (2011). The results were that non-Hispanic Caucasian students had a significantly higher financial literacy assessment score than African American, Hispanic, and other students (Moten, 2011). Income level, independent of race, had a significant effect on financial literacy scores; households with income of $80,000 or more had the highest mean score compared to other income levels (Moten, 2011). As income increases, so does financial literacy (Kirch & Potrich & Vieria, 2014). A large disparity in financial literacy appears among high school seniors of different ethnicities and household incomes. To have a financially literate population, educators must understand these disparities and tailor programs to address them. It is important to note that educators do not need to worry about gender as an obstacle, as studies show it does not significantly impact financial literacy (Taylor & Wagland, 2009).

Creating a financially literate population is dependent upon experience, and not just formal education and assessment. In other words, financial literacy is a lifelong process and not resulting only from a course (Taylor & Wagland, 2013). From a recent study of over 3,500 young adults who received and did not receive financial education, the data suggests that an individual's and their parents' financial experiences affect their financial literacy more than education (Peter & Tang, 2015). The experiential learning theory (ELT) can be used to help understand the gap in financial literacy due to both types of experience. ELT states that an individual develops knowledge through experiences, observations, and conceptualizations that require practice over time (Peter & Tang, 2015). Practicing over time provides experience because someone can apply their knowledge over a period of time in several situations. Considering ELT, coursework from schools constitutes most conceptual learning and thus should positively impact financial literacy (Peter & Tang 2015). However, Peter and Tang's analysis of 3,597 young adults who did and did not receive finance education in college revealed that there is a positive relationship between parents' financial knowledge and an individual's financial literacy that is stronger in those who lack financial education than those who do not (Peter & Tang, 2015). In other words, parental financial knowledge positively correlates to an individual's financial literacy more than formal finance education. Knowing student experiences gives educators a sense of how they can tailor programs to create a financially literate population.

Information relevance also obstructs effective financial education. Students undergo education and have the intellectual resources to make financial decisions, but lack immediate relevance to put it to use. Thus, a high school finance course may not have an immediate impact on financial literacy because of this relevance lag (Klein & Mandell, 2009). Attitudes towards finance can also create a relevance lag in students; attitudes may depend upon the economic environment encouraging the necessity to use financial knowledge. The efforts of financial education in schools is often only successful only in short-term situations due to the relevance lag (Klein & Mandell, 2009). Klein and Mandell conducted a study of 79 student respondents who graduated from a single high school with a distinguished and well-known personal finance management course. This population let Klein and Mandell study the impact of the course on their financial behavior without worrying over curriculum differences (Klein & Mandell, 2009). The data concurred with the Jump$tart Coalition data; students who had not taken the course achieved a slightly higher average score (69.9%) than those who did take a personal finance course (68.7%) (Klein & Mandell, 2009). While data revealed that courses did not impact financial literacy, their study showed that students attending or graduating from a 4-year college had a significant positive impact on financial behavior, which likely changed because of the financial stakes in education (Klein & Mandell, 2009). Klein and Mandell's study contributes to developing and analyzing a finance program that will affect student behavior by adding concepts of immediate relevance.

When introducing a new area of study, schools need trained and qualified staff; only the financially literate can develop financial literacy in others ("Who Will Own Our Children?: The Report of the NASBE Commission on Financial and Investor Literacy", 2008). Teacher testimonials reveal many feel uncomfortable teaching personal finance because of a lack of training (Hensley, 2011). Training workshops for potential finance educators are helpful to boost confidence and student value in personal finance classes.

Addressing Obstacles and Ways to Improve:

An obstacle of introducing finance education in schools is the cost. However, the cost of class materials may not be an issue. Mackenzie Ryan presents ways teachers can get free classroom resources through a federal initiative, #GoOpen, and a network of teachers, TeachersPayTeachers (Ryan, 2016). Over fifteen states pledge to post content they created on #GoOpen, which allows educators to share material through an open license (Ryan, 2016).

TeachersPayTeachers is a network of over four million active members who have access to a collection of over two million lesson plans and other resources. TeachersPayTeachers rates the material listed for quality, practicality, thoroughness, and clarity, which helps them feel more confident in using someone's materials (Ryan, 2016). While a major obstacle in establishing financial education programs is the costs, there are initiatives like #GoOpen and TeachersPayTeachers for educators to incorporate finance lessons for free.

Data from interviewing college students revealed that full-time high school or college courses in personal finance do not improve financial literacy, but only financial behavior (Hanson & Mandell, 2009). Financial literacy is more important to cultivate because it represents an understanding of personal finance and can be applied to all financial situations. Opportunities to bridge the gap in financial literacy and behavior include problem-solving skills and stimulating student interest in personal finance (Hanson & Mandell, 2009). Because of the endless applications of personal finance, programs should include problem-solving techniques for students to adapt to different financial situations and options. Stimulating interest in personal finance will also likely improve financial literacy because students will be more engaged with class material (Hanson & Mandell, 2009). Interactive games help stimulate interest by putting students in charge of financial decisions they likely have not experienced before. Having students make decisions in games, personal finance has an immediate relevance and can eliminate the relevance gap often seen in finance material and young adults.

Why Financial Literacy Matters

Financial decisions can affect our short and long-term quality of life. Financial education is important because of how it affects our well-being. Making well informed financial decisions can benefit us, while poorly planned decisions can ruin our plans and expectations for life.

The mortgage crisis of 2008 displays the financial illiteracy of consumers and its impacts. In 2008, low mortgage interest rates attracted people to buy homes. Home prices increased, so buyers felt secure in their investment, and lenders felt confident with homes as collateral (Pritchard, 2018). Lenders also invested in mortgages, leaving loan qualifications low to meet the high demand of mortgages. Many Americans qualified as sub-prime borrowers as loan qualifications deteriorated and were able to get a loan to pay for high home prices. Sub-prime borrowers were generally financially illiterate, as they could not distinguish between an option-ARM loan and a traditional fixed-rate mortgage (Pritchard, 2018). An option-ARM enticed sub-prime borrowers because it boasted a low payment, but many could not afford the interest payments, which would make the loan increase after a payment (Pritchard, 2018). With stagnant wages and a home prices dropping, sub-prime borrowers could not afford their payments. If they had the knowledge to choose between financial products, many Americans could have saved themselves from being homeless. Not only financially hurt, but many were disappointed that they could not fulfill the “American Dream” of owning a home.

Financial education can benefit society by helping people avoid financial pitfalls. Today’s financial market is increasingly complex and education can help consumers make the best choice for their lifestyle (Hanson & Mandell, 2009). Financial education prepares people for the frequent decisions they will have to make in life like budgeting income, managing debt, and preparing for retirement. Overall, financial education is necessary to prepare people to use their resources to their fullest potential.

Methodology

To assess the financial literacy of students in Franklin High School, I created an assessment with ten questions. It was administered in January of 2019, prior to when the students began the courses selected for testing. Students in “My Money, My Life”, “Sports Marketing”, and “United States History” completed the assessment. My Money, My Life is the personal finance course offered at Franklin High School. This course aligns its curriculum with the researchers from the Jump$tart Coalition. Sports Marketing is a business course, but does not contain personal finance material. The United States History course is unrelated to both business and personal finance.

I chose to include the business and history courses to gather data from students with different interests. Assessing Sports Marketing students will highlight gaps between the like-minded business students in the finance course. Students who elect to take a personal finance course or a business course, likely have an interest in finance. Therefore, assessing the United States History course assesses students that are not likely to have an interest in personal finance. Testing students with different interests may show correlations between interests and score.

The assessment was created using the My Money, My Life course curriculum from the Franklin High School Business Department. The curriculum was created in alignment with the reputable Jump$tart Coalition, and would help gauge what an education professional would reasonably expect high school level students to understand in personal finance. Topics of the Jump$tart survey became the topics for the assessment questions: income, money management, saving and investing, and spending and credit. Beginner level personal finance textbooks offered inspiration and guidance to how finance questions are worded. In addition, Professor Bryan

Coleman at Assumption College and Professor Miguel Carmo at Franklin High School offered their input of the fairness and difficulty level of the assessment for high school students.

The following is the assessment given to the My Money, My Life, Sports Marketing, and United States History classes:

Assessment for **"My Money, My Life"**, **"Sports Marketing"**, and "**United States History"**:

Circle which class you are enrolled in above and circle the corresponding letter to indicate answers.

1. **Spending and saving:** What is a drawback of a regular savings account?
   a. Low minimum balance requirement
   b. Ease of withdrawal
   c. Low interest rates
   d. Deposits insured by banks

2. **Employment and income:** Does net income account for the deductions in monthly income from taxes?
   a. Yes
   b. No

3. **Credit and debt:** When paying off credit card debt balance with interest fees, is it a better decision to:
   a. Pay more than the monthly minimum payment advised by the company
   b. Pay only the monthly minimum payment advised by the company
   c. Pay less than the monthly minimum payment advised by the company
   d. Make no payments

4. **Investing:** You want to purchase common stock shares of ABC Company. Who might you interact with in order to buy or sell shares of stock?
   a. The payroll department of ABC Company
   b. The CEO of ABC Company
   c. The accounting department of ABC company
   d. A broker

5. **Risk management and insurance:** You are considering investing to create a portfolio. To decrease the overall risk in your portfolio, would you purchase more or fewer assets to go in the portfolio?
   a. More
   b. Less

6. **Financial decision making:** When analyzing investments, it is typical for investments with higher risks to offer higher returns to investors.

   a. **True**
   b. False

7. **Financial decision making:** Are there laws in place to provide consumers with protection for validating the accuracy of information regarding their debt?
   a. **Yes**
   b. No

8. **Credit and debt:** When you have a substantial amount of debt, is it ever desirable to declare bankruptcy, whether it is Chapter 7 or Chapter 13?
   a. Yes
   b. **No**

9. **Credit and debt:** Under most circumstances, unfavorable data on your credit report, such as filing for bankruptcy, will likely be removed from your filed in:
   a. 5-7 years
   b. 6-8 months
   c. **7-10 years**
   d. Whenever the unfavorable data is resolved (i.e. repayment of debts that created unfavorable data)

10. **Investing:** Investors seeking long-term growth typically choose to invest in stocks and mutual funds.
    a. False
    b. True

** End of the assessment. For purposes of the thesis, correct answers are indicated in bold. **

Data

Exhibit 1
Average Scores and Standard Deviation per Class

Class	My Money, My Life	Sports Marketing	U.S. History
Average Score	71.7%	55%	47.6%
Standard Deviation	12.49%	15.05%	13.93%

Exhibit 2
Average Scores by Dimension

Dimension	My Money, My Life	Sports Marketing	U.S. History
Spending & Saving	94.4%	55.5%	52%
Employment & Income	94.4%	55.5%	40%
Credit & Debt	48.1%	29.6%	36%
Investing	77.7%	63.9%	40%
Risk Management & Insurance	72.2%	72.2%	68%
Financial Decision Making	72.2%	88.9%	78%

Exhibit 3
Scores for Each Survey Across Classes

Survey	My Money, My Life Class	Sports Marketing Class	U.S. History Class
1	80	60	80
2	80	90	50
3	70	60	50
4	70	50	30
5	80	50	20
6	60	20	50
7	80	50	40
8	90	50	60
9	60	70	40
10	90	50	60
11	80	40	60
12	50	60	50
13	60	70	50
14	80	50	60
15	80	50	50
16	70	70	40

17	60	40	60
18	50	60	30
19	N/A	N/A	20
20	N/A	N/A	40
21	N/A	N/A	40
22	N/A	N/A	60
23	N/A	N/A	40
24	N/A	N/A	50
25	N/A	N/A	60
Average Score (%)	71.7	55	47.6

Exhibit 4
Frequency of Error for Each Survey Question

Question	My Money, My Life Class	Sports Marketing Class	U.S. History Class
1	1	8	12
2	1	8	15
3	12	12	15
4	3	7	17
5	5	5	8
6	4	1	5
7	6	3	6
8	4	9	15
9	12	17	18
10	5	6	13

This table displays how many times that each questioned was answered incorrectly by each class.

Data Observations

1. The My Money, My Life class has the highest average grade, 71.7%, followed by the Sports Marketing class and United States History class averages, 55% and 47.6%, respectively. The standard deviations for the scores are: 12.49%, 15.05%, and 13.93%, respectively.
2. The My Money, My Life students had the highest average score for every question dimension except financial decision making, indicated in Exhibit 2.

3. Students in My Money, My Life had less instances of error compared to the history students for all questions except question seven, as shown in Exhibit 4.
4. Credit and debt questions had the most instances of error across all classes, indicated in Exhibit 4 for questions three and nine.
5. Exhibits 2 and 4 indicates Sports Marketing students had the least amount of errors for financial decision making, questions six and seven.

Discussion

Observation 1. The My Money, My Life students yielded the highest average and lowest standard deviation; they scored the highest and nearest relative to each other. In other words, the students scored the most similar to each other. The Sports Marketing students had the second highest score, but had the highest standard deviation. Their scores varied the most relative to each other. Lastly, the U.S. History students had the lowest average and second lowest standard deviation. The history students had the lowest score, but scored closer to each other compared to the sports marketing class.

Observation 2. The My Money, My Life students scored higher per question category than all other students, except for financial decision making. Questions six and seven refer to financial decision making. There were less total instances of error for these questions from the personal finance students, shown in Exhibit 4. However, in comparison to the total number of responses, the average score for the financial decision making section is lower than the history students', shown in Exhibit 2.

Observation 3. Question seven presented a challenge to My Money, My Life students, because it was the only question they had equal instances of error compared to the history students.

Observation 4. Questions three and nine relate to the credit and debt topic from the My Money, My Life curriculum. They had the most instances of error among all three groups of students. Question three reads, "When paying off credit card debt balance with interest fees, is it a better decision to: a. Pay more than the monthly minimum payment advised by the company, b. **Pay only the monthly minimum payment advised by the company**, c**.** Pay less than the monthly minimum payment advised by the company, d. Make no payments". The concept of this question relates to the time value of money and net present value, which may have been advanced for the high school level. The majority of students chose the option that most people would intuitively choose, to pay more than the stated bill. The response is incorrect because someone would want to pay the amount stated instead of more, so they can invest the remaining money. Question three represents an application opportunity for students, where they can take the concept of time value of money and apply it to a situation.

Question nine reads, "**Credit and debt:** Under most circumstances, unfavorable data on your credit report, such as filing for bankruptcy, will likely be removed from your filed in: a. 5-7 years, b. 6-8 months, c. **7-10 years**, d. Whenever the unfavorable data is resolved (i.e. repayment of debts that created unfavorable data)". This question does not require the application of knowledge and concepts, but requires memorization. A student may understand the topic of credit and debt well, but could not receive credit if they did not remember the fact.

Questions that only require memorization likely do not represent personal finance knowledge well because they do not require high-level knowledge application, like making a financial decision. Besides formal education, one can obtain knowledge through experiences and observations (Peter & Tang, 2015). It is likely that the students have not experienced or observed personal finance situations, so the application style questions may be difficult for the students.

Factors Behind Failing the Assessment

Interest. A passing grade for this assessment was set at 60%. While the marketing and history classes did not have a passing average score, the personal finance students did at 71.7%. The marketing and history students averaged 55% and 47.6%, respectively. The observation of average score draws a broader conclusion, that high school students have the capacity to learn about personal finance, evidenced by their ability to achieve the passing score of 71.7%. Students with an innate interest in personal finance, those who enrolled themselves in the elective course, were the only group of students who averaged a passing score. There is a clear need for personal finance education because the students not in the class, and without an innate interest, failed the assessment. The purpose of this thesis is not to evaluate the personal finance course’s effectiveness, but to demonstrate that high school students need personal finance education.

What sets the students in My Money, My Life to those in marketing and history classes? My Money, My Life is an elective course, so the students chose to take it. Therefore, it is assumed the students in this class have an interest in the course. Research indicates interest in personal finance correlates to an individual’s financial literacy. An interest in personal finance affects student financial literacy because of possible outside studying and engagement. For example, an interest in personal finance likely leads to students dedicating more time to their finance studies and exploring related content outside of class that can progress their financial literacy. An interest in the class subject likely leads to stronger engagement in class with the material, like paying attention to the lectures and engaging in class discussion. Further exploration of subject matter likely leads to higher performance on assessments because students are reinforcing the material. The students who elected the My Money, My Life personal finance course had an innate interest, which likely contributed to their passing average.

Parent wealth. The students assessed attended Franklin High School in Franklin, Massachusetts. According to the United States Census Bureau, the median income per household in Franklin is $111,935 (2018). The median income of the United States according to the Census Bureau is $61,937, slightly over half of Franklin's (2018). The wealth of parents in Franklin may offer insight to why the marketing and history students failed. Parents with a higher net worth are less likely to worry about personal finance, while those with a lower net worth are more likely to worry. While there is no information on the net worth of the parents, the median income supports that the parents of the students likely have sufficient economic resources to maintain a comfortable standard of living. High net worth parents protect their children from financial concerns, and do not typically have their children practice personal finance skills (Chatterjee & Kim, 2013). In addition, the high school students likely depend on financial support from their parents. It is possible that because parents were not stressed over personal finances evident by the median income, and the high school students were unaware of the personal finance practices of their parents. This could simply be due to the fact that there was no necessity for the parents to involve their children in financial planning and support.

Wealth can also affect parents' socialization of personal finance education to their children (Chatterjee & Kim, 2013). Parent socialization is the emotional responses to financial situations. Socialization and wealth are connected because an access to economic resources and wealth would affect responses to financial situations. Research of parent socialization and instruction of financial matters to their children suggests a positive influence on their child's development of financial skills and knowledge (Chatterjee & Kim, 2013). Since parents in Franklin are likely wealthy, they have access to more financial assets. Therefore, it is likely that they have positive socialization to financial matters such as: exhibiting less stress and open communication with children about finances. Parent socialization is likely strong in Franklin due to the access of economic resources and standard of living. Socialization in combination with child efforts to obtain personal finance knowledge is strong, so the socialization factor would likely apply most to the My Money, My Life students who elect to pursue personal finance knowledge. Of the three classes, these students elected to take a finance course, exhibiting effort to develop their financial literacy. The possible effect of this factor would be lower for the Sports Marketing and United States History students as they showed less of an effort to develop their finance knowledge by not electing the finance course.

Parent education. The United States Census Bureau reports that in Franklin 96.1% of those twenty-five years and older graduated high school, and 56% of people twenty-five years and older have a bachelor's degree or higher (2018). Attending college entails financial responsibility, like how to finance their education and parental expectations of financial independence. Therefore, it is reasonable to assume that the college experience of the students' parents likely benefitted their own financial literacy. Even if the high school students' parents did not pursue secondary education, it is nearly certain that they graduated high school. Graduating high school also presents opportunities for financial independence and experience as the parents transitioned into adulthood, like employment opportunities. Therefore, the parents likely have a sense of financial literacy due to their education and can share it. In addition to obtaining personal finance experience through pursuing education, it is also more likely that parents with degrees can provide more resources for their children to develop their education (Chatterjee & Kim, 2013). The enrollment rate of parents can also indicate that they were more likely to receive financial education because they continued and completed their education, in comparison to if they had dropped out of school (Moten, 2011). Overall, the high probability of educated parents in Franklin leaves an opportunity for the foundation of their children's financial literacy through sharing knowledge and/or providing resources to access financial education.

Gender. Gender was not recorded for the assessment. Some of the literature suggests that women are more risk-averse and less confident in financial decision-making, leading to lower levels of financial literacy (Taylor & Wagland, 2009). However, in other studies of like-minded business students, gender was not a significant factor in determining financial literacy. While some may see not recording gender as a limitation, it likely is not. The assessment includes two business-related courses, personal finance and marketing, so the data has female and male business students. With the addition of the history class, the data allows the possible influences of women who are not interested in business.

Assumptions Used

An assumption used in the data analysis was interest in the course. As discussed, an interest in personal finance subject matter likely affects their personal finance knowledge acquisition, and therefore their assessment score. This assumption seemed accurate and fair because of the nature of course selection at Franklin High School. My Money, My Life is an optional course. However, there may be students who only took the course to complete their schedule or who may have been influenced to take the class, absent of their own interest. The other assumption made in the analysis is that parents and students reside in Franklin. The census information for Franklin was used to consider the wealth of parents.

Assessment Limitations

Difficulty level. The assessment's difficulty level is a possible limitation. As a college student working with a college professor, the assessment may have been considered to be too difficult for high school level students. My advisor and I determined that the questions were suitable for a beginner in personal finance. Some may argue that the assessment difficulty level does not matter because the students should be acquiring the knowledge through the course. The assessment level is important because as discussed earlier, it is likely that the students do not have much personal finance experience. Therefore, it is likely that the My Money, My Life course is their main source of financial education. The assessment should be of the same difficulty level as the course to determine if students are acquiring financial knowledge.

Parent and family information. The assessment limits the ability to conclude and assume about the knowledge acquisition of the students from the course. Data that could have been collected included is parent and family information. As discussed previously, parents are a large influence in child financial education. Collecting information about parents' income, level of education, and their financial experiences could have helped compare student groups. While gathering more information can help separate students from each other, correlation does not lead to causation. Therefore, gathering more information may not necessarily help determine why some students acquire more financial knowledge. In addition to factors discussed, some students may be better at taking assessments and guessing answers; in other words, some extraneous factors that cannot be accounted for may affect scores.

Interviews with students and families could help understand some of the factors outside of formal education like parental experiences and socialization of the material to children. Positive relationships between parents’ financial experience and knowledge is stronger in those who lack education. Those who lack financial education were able to catch up to those with formal education because of their own financial experiences and parents’ experiences (Peter & Tang, 2015). Interviews may have revealed parental experience and socialization data about the marketing and history students to see how they compared to the finance students and their formal education.

Conclusion

The financial literacy crisis in young adults across the United States persists in Franklin High School students. This thesis analyzed the scores of a personal finance assessment across three groups of students to analyze the differences in those who received formal education, had interest in business-related studies, and those who had neither. From the data, it is clear that formal education does not guarantee better financial knowledge acquisition among the students. There were personal finance students who scored below a passing grade, and the class did not outperform the other classes of students in all question dimensions. Formal education is not the only way to acquire financial knowledge, which presents an opportunity for all young adults to develop their personal finance skills through other means.

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