2018

Key Components in the Financial Literacy of College Students

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KEY COMPONENTS IN THE FINANCIAL LITERACY OF COLLEGE STUDENTS

A MASTER'S THESIS PROJECT

SUBMITTED TO THE FACULTY

OF BETHEL UNIVERSITY

BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF

MASTER OF EDUCATION

MAY 2018

Acknowledgements

I would like to thank my wife, Ali, and my daughter Evie for providing a great amount of support throughout this process. They have been a constant source of encouragement and motivation. I would also like to especially thank my mother, Alex, who has been a great help in keeping me on track. I likely would not have finished this project without her feedback and organizational skills. Finally, I would like to acknowledge all the teachers within my family. My father, Eric, who still shows passion for teaching French students basic grammar, or as he calls it, the "parlez-vous". My stepfather, David, who is incredibly patient with his guitar students. They have served as wonderful role models and I hope their skills transfer to me one day.

Abstract

There appears to be a severe lack of financial literacy education for young people today. This problem is compounded by the increasing complexity of adult's financial lives. This is a literature review to analyze current design of financial literacy programs of college students. The goal was to identify training needs, challenges, and key components to include in instruction. In this review, both financial decision-making during school years and after graduation were included. Several key themes emerged including the importance of including relevant math instruction, involving parents, teaching about credit card debt, ensuring students receive adequate financial assistance, and applying knowledge correctly and establishing positive long term behaviors. Financial educators would be well served to have their students complete self-reflection activities and engage students with topics that are relevant to their current situations.

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CHAPTER 1: INTRODUCTION

Purpose of the Study

The purpose of this study is to analyze current literature of the design of financial literacy programs for college students. The goal is to identify training needs, challenges, and key components to include in instruction. In this review, both financial decision-making during school years and after graduation will be included.

Background

Financial Literacy can be characterized as either basic or advanced. Lusardi (2008) defined basic literacy as the skills needed to make day-to-day financial decisions. Relevant skills would include understanding concepts such as the time value of money, compounding interest, and inflation. Advanced skills deal largely with investing. This would include topics like diversification, types of investment instruments, and risk management.

Overview of the Literature

Lusardi found that different groups have lower levels of financial knowledge. The groups with some of the lowest levels include women, African Americans, Hispanics, and people with low educational attainment. People in general cannot perform simple financial calculations. They do not understand basic financial ideas such as: compounding interest, risk diversification of assets, and understanding more complicated concepts is even more rare. Most people do not have a grasp on differences between stocks and bonds, how mutual funds work and how assets are priced.

Other studies had similar findings. The Organization for Economic Co-operation and Development (OECD)'s Programme for International Student Assessment (Pisa, 2014) conducted an assessment of the financial literacy knowledge of 29,000 adolescents in 18 different countries. The assessment covered areas such as understanding a bank statement, the long-term cost of a loan or knowing how insurance worked.

The researchers found that one in seven students was unable to make even simple decisions about everyday spending, and only one in ten had been able to solve complex financial tasks. The U.S. did not score well in comparison with other countries. The countries that did the best included China, Belgium, Estonia, Australia, and New Zealand. There was no significant difference between genders. There was, however, a difference by socio-economic status and unsurprisingly those with wealthier, better-educated parents scored much higher than those from poor families. There was also a strong correlation between math and reading skills and higher financial knowledge. Non-immigrant students were also noted to have scored better than immigrant students, even after controlling for socio-economic status.

Despite evidence showing low financial knowledge, students are overconfident in their understanding of financial matters. Karaa and Kugu (2016) investigated the relationship between student's knowledge of financial concepts and their confidence in their abilities. They surveyed over 1100 university students using the financial literacy instrument developed by Lusardi. Each student answered basic and advanced financial questions. Next, the students completed a self-evaluation on how they performed. For each category they rated themselves on a five-point Likert scale (from Very Confident to Not Confident At All). The researchers then compared the financial literacy scores to their confidence levels. They found about half the students overestimated how deeply they understand the financial concepts. There was a relationship between higher scores on the financial literacy test and a greater degree of confidence, however even the best students understanding was still quite low in comparison to the level of confidence they displayed. Over-confidence could manifest itself in poor judgment in investing habits. Other researchers (Odean, 1998), have found this overconfidence often would result in over-trading investments and yielding a lower return.

Low financial literacy leads to financial stress. Brit, Mendiola, Schink, Tibbetts, and Jones (2016) conducted a study to determine what factors increased student's financial stress. They also wanted to know if it had an impact on their academic performance. They sent a 24 question online survey to 2,236 Midwestern college students. Their study found that financial and life stressors, higher subjective financial knowledge, fewer financial resources, negative perceptions, and lower mastery are associated with higher financial stress. However, they did not find a specific link between financial stress and academic performance.

Most colleges do not offer financial education. Geddes and Steen (2016) analyzed the state of financial literacy education across 322 higher educational institutions. They looked for any kind of financial education, either investing or personal finance. The researchers found that 65% offered neither.

Students who have had a financial education class are more likely to seek help, increase their knowledge and succeed in college. Unsurprisingly, it has been demonstrated that taking a financial literacy course does indeed raise financial knowledge (Seyedian and Yi, 2011). Taking a financial literacy course is an important precursor to utilizing college financial advising resources. Hanna, Heckman, Letkiewicz, and Montalto (2015) wanted to examine some of the predicting factors that resulted in which students would use these financial resources. They reviewed data from the 2010 Ohio Student Financial Wellness Survey.

Students who have completed a personal finance course are in need of follow-up services. Goetz, Cude, Nielsen, Chatterjee and Mimura (2011) surveyed 509 undergraduate students about their interest in several delivery methods: on-campus financial counseling centers, online financial management resources, and in-person educational workshops. They found that students who took a personal finance class showed interest in utilizing at least one of these delivery methods. Online courses were the preferred method, followed by workshops, and then a financial counseling center.

Financial Literacy is increasingly becoming a more important topic to students entering college. The world they are transitioning into requires a great deal of knowledge to help them successfully navigate through. Students also need help in developing healthy attitudes and behaviors regarding their management of money. Educators can help students analyze their previous attitudes and behaviors and examine what could be changed or improved upon. Without this help, these students are at much greater risk of getting into early financial trouble. This can cause a great deal of unnecessary pain and have a severe negative impact on the young adults' overall sense of well being.

Research Question

The guiding research question for this literature review is what are the training needs, challenges, and key components to include in financial literacy of college students. The goal is to help students navigate their financial lives during college and also set them up for a successful transition into managing money as an adult.

CHAPTER II: LITERATURE REVIEW

Characteristics of Effective Financial Literacy Programs for College Students

To locate the literature for this thesis I conducted a search through Academic Search Premier, Expanded Academic ASAP, and EBSCO MegaFile. I searched from 2008 to 2018 and narrowed the search by using only peer-reviewed journal articles. The key terms utilized were *financial literacy and college students*. This yielded a total of 86 articles. The structure of this chapter is to review the literature on characteristics of effective financial literacy programs in this order: Relevant Math Instruction; Application of Knowledge; Financial Aid Process; Credit Card Debt and Positive Behaviors; Future Income and Repayment; and Pros and Cons of Delivery Systems.

Relevant Math Instruction

One of the most important factors in building an effective financial literacy program is to include relevant math instruction. This has been shown to have a strong correlation with grasping financial concepts and students will have more difficulties in learning without this background knowledge.

In a 2015 study to assess and predict financial capacity and literacy of college students (Solesbee) gathered data from fifty undergraduate students from the University of North Carolina enrolled in the Psychology department (mainly between the ages of 18-19). These students took part in an hour-long series of tests that covered financial literacy knowledge, financial capacity, IQ, Math Computation, Arithmetic, and Reading. The Financial Literacy measure used was created by the National Council of Economic Education as part of their article entitled *What American Teens and Adults Know about Economics*. Their results indicated that the strongest correlation between high financial literacy scores was when students also scored well in Math Computation. Specifically, the test used for Math Computation was the WRAT-4 Math Computation Subtest used in measuring a student's proficiency for solving computational math problems. Average scores for the Financial Literacy exam were 64 out of 100 for men, and 66 out of 100 for women. The WRAT-4 Math Computation accurately predicted 21% of overall scores, which was the highest correlation. IQ followed as the next best predictor with 11%. Within the Math section of the exam, high arithmetic scores were found to be particularly important to scoring well on the Financial Literacy and Capacity sections. This indicates that while one may not have the background of the specific financial concept being tested, a familiarity with the math skill associated could prove beneficial.

The implications of this study show that it is important for instructors of financial literacy to conduct pre-knowledge tests of students to ensure they have the necessary math skills. It may even prove beneficial to teach the concepts hand in hand and have students solve examples testing those math skills (arithmetic, computation, calculation). Without doing this, instructors risk students being unable to fully grasp the concept or being unable to apply their knowledge to a real world situation.

Application of Knowledge

An important factor in developing a strong Financial Literacy program is to ensure students are able to apply knowledge to their specific situations. In other words, teachers must be aware that not all students have the same background and some topics may not be relevant and as easily applied. This includes factors such as socio-economic background, gender, race, and age.

Graves and Savage (2015) conducted a qualitative study to assess student's ability to grasp information on personal finance. Their goal was to detect differences in student's backgrounds and see how it related to their ability to successfully apply the lesson content. They had students from a community college who were enrolled in financial education courses write essays to describe their financial past, present and future. The essay specifically asked for students to give five steps to improve their financial situation and also envision what a successful self would look like in three years. The essay also covered what students had learned from previous financial failures they had encountered. These students ranged in age from eighteen to twenty four and came from a variety of socio-economic backgrounds. Graves and Savage (2015) reviewed the essays and split them into three primary measures. First, was the duration of scarcity or poverty that the student had endured. The second and third measures related to how well the essays showed the concepts from the class were being applied to the student's specific situation. Graves and Savage sought to measure several factors: how specific were the student's financial goals, were they measurable, were they achievable and realistic, and did they have specific timeframes. They used qualitative software and an external rater to analyze the essays and break them up into themes and demographic characteristics of the students. What they discovered was that students who had experienced long-term poverty tended to have difficulties setting specific financial goals. They often viewed education as a goal that once attained would separate themselves from their family's difficult financial past. Their descriptions of their future selves in three years often lacked specific detail. Those with shorter-term experiences with poverty, viewed financial education as a tool to help set specific individual goals (budgeting, paying off debt quickly, earning a higher income).

Gender was also analyzed in the study completed by Graves and Savage. One theme that emerged was the differences in need versus want as related to spending. It was found that, generally, men would often indulge in overspending on meals and entertainment, while women would overspend on consumer goods.

The study by Graves and Savage indicates that financial educators need to be aware of the differences in student's backgrounds and gender and tailor their topics to these individuals. Specifically, teachers must help students from long-term scarcity backgrounds set specific and more short-term financial goals. These must also help towards a path to the student's long-term goals. Gender should also be considered by financial educators, especially as it relates to the topic of *need verses want* spending habits. This could help when discussing topics such as monthly budgeting.

Financial Aid Process

Strong financial literacy programs for college and high school students pay particular focus to the financial aid process. As this is one of the most important financial topics to students during this period in their lives, educators must make sure that students have a strong grasp on what resources are available to fund their education. Without doing this, teachers set up the students for failure and many are unlikely to complete a degree and default on any loans they previously took out.

Greenfield (2015) conducted a one-year ethnography study at a public high school in the Bronx, New York. This school suffered from very high poverty but was successful at preparing over 90% of their students to enroll in either a two or four-year college. The students who were studied by Greenfield included 14 high school seniors from low-income backgrounds, but also self identified as *college-bound*. Eight of the 14 students were female, and six were male. They came from a variety of ethnic groups and various levels of academic achievement. The students were observed by the researcher, completed interviews, took part in focus groups, and had written documentation reviewed over the course of the study. Greenfield discovered a number of themes emerged over the course of the study. The first theme was that students often had inaccurate or incomplete pictures of the financial aid process at the beginning of the year. Many of these perceptions came from family and friends much earlier in their lives. Most students understood that college was expensive, but knew little of how most people are able to fund their education. The second theme that emerged was that students did not begin acquiring information on financial aid until well into their senior year. At this stage, students began to understand that costs vary greatly between different institutions and each school differs on what they are able to offer to help cover these costs. This period of time was also the first introduction students had with the Free Application for Financial Student Aid (FAFSA) form. Many students found it very challenging to complete, and it often involved difficult conversations with parents about income. Most students relied on completing the form with a student advisor, but these resources were often lacking in the school.

Greenfield also noted several challenges students faced with their financial aid process. The first challenge was the sequence of events in their senior year was often out of order. Many students did not realize they were eligible for further grants until their FAFSA had already been completed, college applications were out, and they received their award letter. This was due to incomplete information on what was available with each school in terms of specific grants and scholarships. The second challenge was that school resources were insufficient to cover each student's individual needs as it related to gaining all the awards possible. In the high school that was studied, there was only one advisor to cover several hundred students and as a result, a model was built where students were given the responsibility to seek out help on their own. The problem was that students did not always realize they were missing deadlines or opportunities for additional aid. A third challenge is that many parents were wary of the financial aid process. They often were unwilling to submit details on income or assets, or worried about their immigration status. Often, there were cultural or language barriers where students needed to help their parents understand why certain information was needed.

There are two main implications from the Greenfield study. The first is that students must be engaged much earlier in their lives as to what resources are available to fund their education. Many have a very minimal understanding until mid-way through their senior year of high school. As a result, many opportunities can be missed, and many students may not even pursue a college education because they feel the financial burden will be too great. It seems likely that providing a course even a year or two earlier would make the process much smoother and help students hone in earlier on the best college choice. The second implication is that additional resources are needed to help student's individual needs. One option would be additional partnerships with college access organizations. While putting the responsibility on students to research and apply for the FAFSA and other forms of aid does help build certain skills, it also can prove to be a barrier. These partnerships would help students gain the information they need to make the best choices and avoid missing out on opportunities specific to where they want to attend college.

Another study also indicated the importance of ensuring students are taking advantage of all financial aid resources at their disposal. Mendoza, Mendez, and Malcolm (2009) completed an assessment of three sources of financial aid being utilized in the Oklahoma Community College setting. These forms of aid included Pell Grants, Stafford Loans, and the Oklahoma Higher Learning Access Program (OHLAP). This is a state-specific guided program starting in eighth grade for low income families. Their goal was to study the relationship between ethnicity and forms of financial aid, and persistence of students from first to second year of college. They analyzed student data from 2002-2006 and focused on first to second year full time students in Community college Associate programs. They found that ethnicity, income, and different combinations of financial aid did result in a variety of outcomes. The most salient result of their study was that low-income students from non-white backgrounds tended to see the most success when they had multiple sources of financial aid (especially the OHLAP program). Unsurprisingly, white students with the highest income had the highest numbers of students progressing from first to second year of college. What this study confirms is that students from underprivileged minority backgrounds need special attention to make sure they take advantage from all sources of financial aid. This is especially true with programs that engage students at a younger age like the OHLAP program that begins in eighth grade.

Parental Involvement

One of the most important factors in creating a strong financial literacy program is involving parents. Students first financial education is often with their parents, with lessons being taught either implicitly or explicitly. Some of this education proves very valuable and in other cases, students are hindered by inaccurate information.

Akben and Altiok (2014) completed a survey of 853 Turkish University students related to four areas of concentration: general financial management, saving and borrowing, insurance, and investing. Their goal was to discover what factors and learning approaches were most significant in influencing student's financial knowledge. Building upon prior research, they hypothesized that male students with a higher Grade Point Average (GPA) and prior work experience would score highest. They further believed students from higher income and more stable family backgrounds would score higher. Along with these factors, the researchers also hypothesized students with higher number of financial courses and direct teaching from parents would have greater financial literacy scores.

Arken and Altiok conducted their survey through several online resources. The students chosen were full time and enrolled in Economics and Administrative Service programs. Financial Literacy scores were measured through the College Student Financial Literacy Survey which is an objective measure that has 27 total questions centering around general financial knowledge, savings and borrowing, insurance and investing. Personal characteristics along with family backgrounds and income levels were also factored into the survey. Students were also given a questionnaire regarding learning styles relevant to financial courses they experienced. Students were then asked about whether several financial topics had ever been discussed directly by their parents and rated on a scale of 0 (no discussion) to 4 (Discussion in all areas).

The results of the survey indicated that Turkish students scored very low overall in financial knowledge with the average falling under half of the questions correctly answered. The researchers correctly hypothesized that male students with more work experience scored highest. However, GPA did not have a significant impact. Unsurprisingly, students scored higher when they had completed more financial related courses. Students also had greater financial knowledge when these topics had been previously explicitly discussed with their parents.

Rowh (2015) also presented numerous strategies to involve parents in students increasingly complicated financial lives. They gave 10 ways to improve communication and resources available to assist parents. The first recommendation was to improve communication and make sure there are both informal and formal opportunities for parents to seek help. This would mean not only having formal orientation sessions where information was presented, but also informal one on one sessions with parents so they can ask individualized questions about topics like financial aid. A second recommendation was to ensure appropriate wording and language choices are being utilized. Often much of the financial literature uses jargon unfamiliar to people who do not deal directly in these areas. It is also essential to avoid too many acronyms and make sure that resources/translators are available for non-English speaking families. A third strategy educators can employ is to avoid the cookie cutter approach and make sure families are being connected with individually.

Rowh also suggests making resources available in multiple formats. Specifically, it states that webpages, e-letters, information videos and interactive tools, and even paper versions of materials should all be included. Perhaps one of the most useful suggestions from the article states that both parents and students should be included together when working through financial topics. This ensures that all parties are becoming knowledgeable and equally engaged and committed. Checking back from time to time separate from the initial orientation is also suggested. This helps parents to stay engaged and make sure positive financial habits continue. It is also important messages are repeated frequently and through multiple avenues. This is helpful to reinforce relevant topics to the parents and avoid simple mistakes like missing deadlines. Finally, it is important to build staff knowledge and even dedicate specific members to be included as part of a financial literacy department.

Jorgensen and Savla (2010) also conducted an online study to determine what effect and to what degree parents had on students financial attitude, knowledge, and behavior. They surveyed 420 undergraduate college students using the College Student Financial Literacy Survey (CSFLS). The survey measures financial knowledge, attitudes, behavior, and perceived influences. It does this through a series of 44 content questions and 18 demographic questions. The questions related to parental influence specifically asked, "How much did you learn about managing your money from parents" and "How often were you influenced by or discuss your finances with your parents." The students were then further questioned on if they learned more using explicit examples or direct discussions with their parents, or rather from learning implicitly from the parent's financial behaviors. The results from the survey indicated that while parental influence (both direct and indirect) had an influence on financial attitudes and in turn behavior, financial knowledge was not affected. The study further indicated that 67% of students expected to learn financial knowledge from their parents.

The implication from this study is that most parents, while able to affect behavior and attitude, still leave a gap of financial knowledge that needs to be filled. Educators need to understand that knowledge will largely fall to them, but engaging parents will in turn likely help in influencing a students behavior in a positive way.

There are also differences between genders in how they relate to their parents regarding discussing financial matters. This needs to be factored in when trying to involve parents into a student's financial literacy education. Edwards, Allen and Hayhoe (2007) conducted a multi-state survey to examine this issue and discover what differences exist between men and women. The 1,317 students sampled were from four major universities in Arkansas, Missouri, Louisiana, and Kentucky. They focused on younger students in their first two years of college. The participants in the study were primarily from Communications classes and some completed the survey online and others took a paper version. The researchers sought to analyze if men or women were more prone to communicate openly about financial matters. They also wanted to analyze how this would impact their financial attitudes. The survey consisted of three sections. The first related to attitudes about money and credit card use. The second section sought to measure student's openness of communication, and the third collected demographic data and information on credit card use, financial support from various sources, and debt incurred.

The results of the survey indicated several differences between young men and women as it relates to their financial situations. First, it appears clear that in general, men received less financial support from their parents than women. Men also were less likely to have open conversations with their parents about their financial situations, credit card use and spending habits. Women were found to be more open with their parents and relied more on their financial advice and monetary support. The study showed that parental financial support was the greatest indicator of whether or not men or women would be open with their parents about finances. Those that received more aid from their parents were more likely to discuss money matters. Edwards et al. determined there was an emotional connection that was stronger for students who received more aid, and parents were also likely to expect more feedback since it was their money on the line. Parents also appear to believe their sons should have more knowledge about money and be more self-sufficient even early in their college careers.

The dynamics between parents and students is nuanced and financial educators need to have an awareness that gender roles can have an impact. It is also important for educators to consider how reliant the student is monetarily and how willing they are to have open communication with their parents. To successfully engage parents in a financial program teachers must factor in these differences and tread lightly especially with those students that are resistant to communicate. After all, most students are trying to establish their independence from their parents, but open communication will help all parties to plan a successful financial future together.

Garrison and Gutter (2010) sought to find out if gender plays an important role in willingness to take risks. They also wanted to research if men and women sought out financial social learning opportunities in different ways. Finally, they sought to analyze the relationship between these two factors. They hypothesized that male college students would be more willing to take risks, exposure to social learning opportunities would be different amongst gender, and the relationship between these two factors would also differ between men and women. They conducted an online survey of 15,797 students from 15 different universities across the United States. The survey asked questions about the student's willingness to take financial risk in their investments and to what degree (substantial, above average, average, and no risk at all). They found that 6.6% of men versus 2.7 % of women were willing to take substantial risks in order for higher profits. The survey also found that 32.7% of men were willing to take above average risk as compared to 16.8% of women; 60.6% of women were willing to take average risk while only 51% of males were willing to do the same. Finally, 20.1% of women would take no financial risk as compared to just 9.7% of male students.

The second section of the survey posed questions as it related to the students social learning opportunities. These learning opportunities ranged from topics about checking credit reports, maintaining health insurance, working with a financial institution and buying and maintaining renter's insurance. It was found that female students consistently had more discussions about financial matters with their parents and peers. Women also consistently showed higher amounts of observing positive financial behavior from their parents and peers.

The study made several important discoveries. Men were confirmed to be willing to take much higher financial risks. They also had far fewer experiences of financial learning opportunities with parents and peers as compared to women. The study also showed a link between an increase in discussions with peers concerning financial matters and willingness to take greater risk. There was not, however shown to be any link between discussions with parents and risk aversion.

As a result of this study, educators should be aware that men are much more likely to take higher financial risks than women. This could prove beneficial when discussing investing and long-term performance of stocks. Women, on the other hand may need to be encouraged to take additional risks with their finances, especially as it relates to investing. Often, taking no risk at all can prove costly, due to the effects of inflation on a person's assets. Involving parents in these discussions would be essential as well as the study appears to show these discussions may not be taking place at home. Conversely, it appears that financial discussions with peers produce the effect of taking more financial risk. While this could be a good thing, it appears likely that the information being conveyed may not be accurate as young people tend to not have as much direct experience with financial products and an understanding of what can go wrong.

Early introduction to financial concepts is likely to have a positive influence on one's future financial outlook later in life. Planning for retirement, for example, needs to happen much earlier in life and individuals have taken on most of the responsibility to manage this. There are far fewer pension plans for retirees, so making sure one's 401k is being sufficiently funded with an appropriate risk tolerance is very important. Herd, Holden and Su (2012) conducted a study to examine the relationship between late-life financial knowledge and early cognition and academic performance. They examined data from the Wisconsin Longitudinal study which began in 1957. At this time, students who completed the survey were in their senior year in high school. A total of 10,317 students participated and also completed follow up surveys in 1964, 1975, 1992/93 and 2003/2005. Herd et al. attempted to capture data on the participant's financial knowledge, and specifically how aware they were of their own financial situations. Topics covered current assets, retirement savings and immediate financial resources. They then compared this data to the original 1957 data to see if there was any correlation between high financial knowledge in retirement years to academic and cognitive scores when they were still in high school.

Herd et al. discovered that early life experiences in cognition and academic knowledge (especially in math) were accurate predictors of future financial self-knowledge. This was especially significant when looking at students who had not completed a college degree. This would seem to indicate that the additional knowledge gained during college was helpful in preparing these students later on to be better aware of their finances. This study helps to illustrate the importance educators can have in setting up students for lifelong financial success. While retirement planning may not be specifically covered in a college course, having the cognitive and academic building blocks has a significant impact in the long run.

The beginning years of college are for most students a first opportunity to assert their independence. They begin to establish their own behaviors that will likely continue throughout adulthood. Students are also for the first time encountering new financial responsibilities such as paying monthly bills, budgeting, taking out debt, and using credit cards. One of the most significant factors in how students handle these new responsibilities and whether they are successful or not is dependent on learned behavior from their parents. Serido, Shim, Mishra, and Tang, (2010) conducted a study to analyze this relationship and discover what had the greatest impact on a student's successful development to cope with their new financial lives. They surveyed 2,098 first year university students over an eight-week time period. The survey had three main sections.

The first section sought to measure perceived financial knowledge, which related to students relationships with their parents in regards to discussing money and finances. The survey also gathered the students opinions on what expectations they believe their parents had for them in managing their money, especially concerning tracking expenses, budgeting, and paying off their credit cards monthly. The survey also gathered data on the parent's income and education levels. The second section of the survey analyzed how well students assessed themselves on managing their money. The survey specifically addressed questions about how well they managed in the short term (monthly spending and budgeting) vs. long term planning (savings). The third section of the survey looked at the student's financial stress, psychological distress, and overall well-being. Questions were asked about how often the students worry about money or have difficulty with monthly expenses. This section also asked how often students felt tired or overwhelmed, and finally, how good the students felt about their lives.

The study discovered that increased communication with parents about finances had a positive effect on student's stress levels and overall sense of well-being. Furthermore, students who engaged proactively in financial coping strategies (budgeting, paying off credit cards, etc.) reported a lower psychological stress and overall well-being. However, the researchers were surprised to see that it added to students financial stress levels. The study was also able to connect the impact parental involvement in their children's financial lives to the development of future coping strategies.

The implication for this study is that encouraging parents to be involved in student's financial lives is very important. Educators can certainly have an impact, but to translate knowledge into positive long term coping behaviors, students need someone to model after. The most natural people to do this are often their parents. Open communication with parents will also help to reduce stress on students and help to develop expectations on how they should manage their money.

One group of students who does not have the same opportunity to receive financial assistance from parents are aging out foster children. They are often left unprepared when entering college and do not have the same safety net of their peers. If they make mistakes early on, they are very likely to drop out of school and compound their problems long term. Smith, Malespin, Richards and Shelton (2017) present a prevention-based model of financial therapy to help these students navigate this important stage of life. In their model, they make a distinction between financial literacy and financial capability. While educators can often help foster students become more literate and understand generalized financial terms and concepts, what these students lack is the ability to translate this knowledge into concrete practices. One solution the researchers offer to assist in translating this financial knowledge into behavior is financial therapy. Their preventative model consists of four steps. The first step is to set financial goals and establish a prioritization of wants. The second step is to develop a prioritization of needs and join these together with the previous list of wants. The third step is a self-reflection on the student's decision-making process as it relates to spending. During this stage students need to gather receipts and statements and see if this evidence is consistent with their self-assessment. The last step of financial therapy is to create a tailored budget that reflects the prioritization of wants and needs established earlier in the model.

The researchers goal in implementing this model with foster students is to provide an outlet for positive change in financial behaviors. Because they are often unable to lean on parents or other family members, this is an essential step to ensure that these students start off on a strong path to financial health. Educators need to be aware that not all students receive the same family socialization and other methods like financial therapy may need to be employed to develop financial capability.

Credit Card Debt and Positive Behaviors

Early in their college careers, many students are beginning to have their first experiences taking out credit cards. It is well known that credit card companies actively market towards this demographic, and sometimes in a predatory manner. Students often lack knowledge about the high interest rates associated with credit cards and the negative impact on credit scores if payments are not made in a timely way. It is essential for a financial literacy program to address this topic and ensure students use credit cards responsibly.

Novilitis, Merwin, Osberg, Roehling, Young and Kamas, (2006) conducted a study to examine what factors influence college student's credit card behaviors. They sought to determine the relationship three risk factors have on these students. The first risk factor was a lack of general financial knowledge. They hypothesized that those that had lower scores in this area would be more susceptible to higher credit card debt. The second risk factor was tendencies toward compulsive spending, materialism and issues with delaying gratification. They believed that students who were prone to these attitudes would also be likely to have higher credit card balances. The third risk factor was related to demographic factors including higher number of credit cards, more hours worked, lower GPA's and being later in their college years. They hypothesized that these factors would relate to an increase in financial stress for many students.

To study these factors, the researchers conducted a survey across five universities in three states in the Midwest, Northeast and Southern United states. A total of 448 students participated and were from varying socio-economic backgrounds. The study specifically sought out students who were sophomores or older as it was believed they would have had more time to accumulate credit card debt. The survey included a total of 173 questions that covered a range of topics including: financial status, financial well-being, credit card use, attitudes toward debt, financial knowledge, and various psychological/personality measures.

There are several significant findings. The first was that financial knowledge is critical and is the strongest predictor of accumulated debt. Those students who scored lower typically had higher balances. The second finding was that the number of credit cards a student possesses has a direct link to higher balances. This would indicate that the mere presence of credit cards results in increased use. This is a likely a key strategy for credit card companies as they often offer some type of reward to open up new card. A third finding of the study was that students who exhibited certain psychological traits were much more likely to show an increase in credit card debt. Those who had more difficulties delaying gratification and had tendencies towards impulsivity often had more credit card debt. A final result of the study that appears significant is that students were often overly optimistic of their future income and ability to pay off debt. The study found that 73% of students estimated it would take them less time than the average student to pay off their credit card balances. Only 18% of students thought they would earn less than the average student.

The implication of this study is that it is essential for educators to address credit card debt as part of a financial literacy program. Credit cards can be an important tool, but when abused can have a negative effect on financial health. Students that lack this knowledge appear to be running higher balances and putting themselves at risk. It is also clear that personality traits can have a strong impact on overuse of credit cards. This should be addressed as well as part of a financial literacy program. Self-reflection exercises could potentially help students with to consider delaying gratification on impulse buys. Furthermore, it appears that students need to have more realistic expectations for paying off credit card debt. With so many thinking they can pay it off faster than their peers, it may be useful to complete budgeting exercises which would show the length of time needed to pay off this debt and the effect that higher interest rates have on increasing this timeframe.

Other studies have shown that the relationship between financial knowledge and credit card balances is more nuanced than previously thought. Robb and Sharpe (2009) conducted a survey to further examine this relationship. They invited participants to complete an online survey which consisted of a total of 83 questions. A total of 3,884 students from a large Midwestern University completed the survey. Topics on the survey included credit card attainment and use, demographic data, attitudes toward credit, online spending habits, and labor force participation. Financial knowledge was then measured with a series of six questions from the Jump$start survey which covers topics on personal finance. Attitudes towards money was measured using a modified version of the Money Attitude Scale, consisting of 20 questions.

The results of the survey indicated that 66% of the respondents had at least one credit card, and the average across the sample was 1.4 credit cards. The average balance was $848.05, with those that had revolving balances at an average of $2,238.46. The average score of the financial knowledge questions was 3.14 out of six. The researchers had hypothesized that students with higher scores on the financial knowledge section would in turn have lower credit balances. The inverse was actually found to be true. What the researchers did find was that older students who were more financially independent tended to carry larger balances. Non-white students and students receiving more financial aid also tended to have more of a propensity to carry a balance.

This study appears to show that the relationship between financial knowledge and credit card debt can be very complex. Simply having higher financial knowledge scores does not always translate into healthy credit card behaviors. It also appears that students are likely to take on higher credit card balances as they progress further into their degrees. As a result, educators must ensure that credit card use is continually addressed throughout college, and alternative borrowing sources covered so students are less reliant on higher-cost forms of debt.

One focus of financial education should be the translation of knowledge into long-lasting behavior. A main goal of a financial educator is to give students the resources needed for a successful transition into adulthood. Students will still need to have their own individualized experiences but familiarity with specific topics will help them greatly.

Serido, Shim and Tang (2013) wanted to analyze in-depth what steps are needed for students to have healthy financial lives and overall well being later in life. They developed and tested a theoretical model of a successful transition into adult life with an emphasis on financial knowledge. They conducted a survey of 1,511 students in their first year of college and then had the students complete the survey a second time in their final year. The survey included a number of topics including financial knowledge, financial attitudes, perceived behavior control, financial self-efficacy, financial behavior, financial well being, and finally overall well-being. The results of the two surveys indicated that as students financial knowledge increased through their college years, their self-beliefs and behaviors developed in a positive manner. This in turn affected their financial well-being and overall well-being. This is a dynamic process that occurs when successful, but is initiated through increased financial knowledge (both subjective and objective). The researchers believe that as increases in knowledge occur, students feel a sense of empowerment over their finances. This change in self-beliefs helps to develop positive behavior patterns with money. This becomes a self-regulating system that over the long run will increase a student's financial health and overall well-being.

The implication of this study is that knowledge, attitudes and behavior do not exist in isolation when it comes to student's financial lives. Each plays a dynamic role and when functioning well can help the student to develop a sense of financial and overall well-being. Like building a house, financial knowledge is similar to creating a strong foundation so positive attitudes and behaviors can develop later in life. Without a strong base of financial knowledge, students are likely going to have a more difficult transition into adulthood. Educators need a strong understanding of the dynamic relationship that is developing and encourage students to continue to learn financial concepts, self reflect on their attitudes, and ensure their behaviors are in line with positive outcomes.

Students often have preconceived attitudes on debt before entering college. Some are fearful on taking out any type of loans, and others have overconfidence in their ability to repay debt. What is often missing is a more nuanced understanding of what types of debt can be beneficial in the long term, and which are unnecessary and can put one at a long-term disadvantage. Harrison and Agnew (2016) sought to uncover what factors influence these attitudes toward debt. They conducted a survey of first year undergraduates in England and New Zealand (NZ). A total of 439 students across diverse demographics were surveyed including 240 from NZ and 199 from England. The questionnaire was completed online and drew upon psychological, sociological and economic perspectives. Twenty questions were asked about attitudes toward debt related to level of anxiety, long-term benefits of debt, willingness to use debt for lifestyle purchases, and awareness of the negotiated terms of the debt being employed. A five item multiple-choice test was also given as part of the survey which covered inflation, compound interest, commercial credit and inflation. Personality factors were also answered by students to address differences in extroversion, neuroticism, conscientiousness, agreeableness and openness to experience. Finally, general demographic data was collected including degree being sought and family's educational background.

Harrison and Agnew (2016) discovered that there existed a complex relationship between debt attitudes and a multi-dimensional framework was needed to explain their development. Students with a high knowledge of their own loans were found to exhibit traits of conscientiousness, introversion, and were more emotionally stable. More anxious students were actually found to have less knowledge about debt. The researchers argued this is somewhat counter-intuitive, as you would expect people with anxiety would do more research before taking out loans. The study also revealed that high financial literacy had an impact on students being averse to take on debt for lifestyle purchases. The assumption is that these students are aware debt should usually not be used for luxury or social purposes. The research also indicates that students may seek to alleviate anxiety through these types of purchases.

Surprisingly, the study also revealed that financial literacy did not have an effect on three of the four debt attitudes, so simply educating students on financial topics is not enough to change these attitudes. There was also a high overall confidence among participants that taking out debt in pursuit of a degree would be beneficial in the long term, with less anxious students having the highest amount of confidence.

The implications of this study show that educators need to understand that simply introducing students to financial topics will not result in a change in attitude on debt. Attitudes should likely be explored as their own topic, with an emphasis on self-reflection. Students with higher levels of anxiety about debt could also be given additional resources to better understand the debt they are using. This may help alleviate some of that anxiety. Furthermore, educators need to have discussions on the use of debt for luxury and social spending and help students understand what attitudes may affect this.

One of the pitfalls of students increasing use of different forms of debt in college is their ability to begin developing poor habits. As access to debt is often very easy, one of the problems with students increase in use is that they can tend to become overly confident in their ability to repay. Credit card limits are often fairly low in these early stages of life, however as limits expand so does the risk. Students often dig themselves into a hole from which it may be hard to emerge. Harrison and Chudry (2011) examined the role that personality had on decision-making and debt and whether financial literacy played a role. They conducted an online study of 604 undergraduates in a large UK University. They specifically focused on two personality traits defined in applied psychology, Extraversion and Neuroticism (those with high anxiety). They hypothesized that extraverts would be more prone to higher debt levels and students with neurotic personalities would worry about finances and avoid taking on additional debt. Their questionnaire consisted of five sections: current experience of borrowing money, anticipated future borrowing, categorization into extravert vs. introvert, attitudes on debt, and measure of financial knowledge. The researchers specifically sought information on 4 types of borrowing: student loans, overdraft, credit cards, and family loans. Financial knowledge was tested through a 13 question multiple choice quiz.

Harrison and Chudry (2011) discovered that there was no connection with overall levels of debt between extroverts and introverts. However, extroverts relied more heavily on short-term overdrafts and borrowing from family. This use of overdrafts also tended to increase in frequency as the students approached graduation. Harrison and Chudry concluded this was likely due to more comfort using this type of transaction. With extroverts specifically, they would often employ this type of borrowing for social expenditures. To make matters worse, Schools also often extended the overdraft limits each year, which further encouraged this behavior.

A second result of the study showed that those prone to anxiety, while they did not have overall higher debt levels, tended to worry more about their financial situations.

This is not surprising, but it is interesting that this anxiety did not produce a lower amount of debt.

Both extroverts and those with anxiety did not tend to have high levels of credit card debt, but it was shown that credit cards began to be used more frequently in students' junior and senior years. This appears to be further evidence that becoming more comfortable with new types of debt can begin to accelerate and there is a possibility bad habits can be formed.

The implication of this study is that educators need to be concerned with the formation of poor short-term debt habits. While comfort with different methods of borrowing could be seen in a positive way, students need to be aware that overreliance on short-term loans can prove costly in the long term. Teachers of financial literacy should also help students with high anxiety to understand that their use of debt is not significantly higher than their peers, and while it should be taken seriously, should not be a constant source of worry.

Future Income and Repayment

It is important for colleges to help students adequately fund their education and also have a strong probability of repaying their loans. This is essential not only for the students, but the institutions themselves, which can be put at risk of losing their federal financial aid eligibility. Students need to have an understanding of what their payments will look like upon completion and whether or not their income level will be sufficient to cover these costs.

Charles, Sheaff, Woods and Downey (2016) completed a case study of the Mohave Community College in Arizona. This school was under risk of losing their federal financial aid eligibility as a result of ballooning student default rates. The college consisted of four campuses and served a total of 5,227 students, 50% of which were over 25 years old and from poorer rural communities. Mohave Community College's three-year default rate had climbed to 28.6%, which was very close to the 30% marker for losing funding. A plan was immediately put in place at the college to bring this down and establish a sense of urgency. The researchers studied this plan by collecting publically available board meeting notes, information via the school's website, and interviews with key MCC personnel leading the change. Charles et al (2016) sought to see if eight steps were put in place to ensure this transformational change to the organization. These steps included: establishing a sense of urgency, form a coalition, creating a vision, communicating this vision, empowering people to act upon this vision, plan and create short term wins, consolidate improvements, and finally institutionalizing these new approaches to create permanent change.

Charles et al. (2016) found that the strongest single factor of preventing default on a loan is to obtain a degree. Many students were not taking enough credits to graduate quickly, and as a result were getting sidetracked and dropping out of school. The school also went through a major cultural change. Initially, when it began to offer federal funding, it did so mainly to increase enrollment numbers. Little thought was given about retention and educating students on the responsibility and negative consequences if they did not pay their loans. The school's leadership empowered all faculty members to emphasize retention and education surrounding student loans. Concrete retention goals were also established with realistic timeframes to be met. As a result, in just three years, the school was able to lower its default rate by eight percentage points.

The application for the case study above is that all faculty has a responsibility to push students to have a strong understanding of their loans and importance of completing a degree. The goal of an institution should not be to increase enrollment numbers, but to ensure that students can graduate in a timely manner and move on to careers where paying off this debt is possible.

Pros and Cons of Delivery Systems

Students learn in many different ways and from varied sources. Traditional classroom teaching can play a large role, but teachers must understand that students often need individualized attention when it comes to their financial lives. This is not always possible for a single teacher to provide, so it is essential that they use additional resources.

One such resource, peer-to peer advising, was recently studied at Penn State University. Reiter (2015) examined this program that was established as part of the library system. During office hours, students were able to visit the library for one on one sessions with their peers who were trained in budgeting, student loans and credit matters. Reiter noted that several features of the program contributed to its success. The first feature was availability of a private workspace where students had a sense of privacy. The library space was ideal because it was quiet and also had rooms where you could close the door and discuss sensitive financial topics without distraction. A second key feature of these peer-to-peer programs was that the peer educators had adequate training in the topics covered. Penn State initially used six finance majors to act in these roles. The topics they received the most training from business faculty at the school were: budgeting, student loans and credit matters. These peer educators had two 12-hour training sessions, and then had a two-week period to study and take an exam covering topics they learned. Another key feature of the peer-to-peer program was ensuring student confidentiality. Peer educators were required to document their sessions and make sure they were not giving advice to students, but rather providing information. The results of the session needed to be kept on record and eventually destroyed after a set period of time.

Peer-to-Peer financial education is another method of students receiving individual guidance. It offers another way for teachers to engage their student's individual needs. Students often feel more comfortable discussing these issues with other students, since it is understood that their peers can easily relate to their current situations.

CHAPTER III: DISCUSSION AND CONCLUSION

Summary of Literature

Student's early financial lives are becoming increasingly complex as a result of the need to finance a major portion of their education. Along with this, they are beginning to assert their independence and develop long-term habits, which will affect their financial and overall well being. The United States, like many countries, has a severe lack of financial education available to our young people (Geddes and Steen, 2016). The majority of students have little understanding of how money works and what they need to do to take advantage of the resources available to them (Pisa, 2014). Financial Literacy programs can help to build a framework that will allow students to develop positive attitudes and behaviors that will allow them to be successful money managers (Herd and Su, 2012). These programs can be most successful when they emphasize certain factors.

The first factor is to ensure that students have the relevant math instruction needed to grasp certain financial concepts. Without this knowledge students are unlikely to be perform related calculation tasks and be able to apply the concept to real world situations. These math skills should be taught simultaneously with the financial concept to ensure the student has a full understanding (Solesbee, 2015).

The second is to encourage involvement from parents, as they can be a useful source of information and model positive behaviors. Parents often pass along certain attitudes about costs of college, taking out loans, and use of short-term debt. These attitudes can often be uniformed and can severely impact student's behavior. Teachers need to form a relationship with parents and ensure that they can be positive role models for their sons and daughters. As students encounter financial challenges, parents will often be their main resource for help. Parents can also provide a level of accountability if students stray from positive financial behaviors. (Jorgensen and Salva, 2010; Serido et al., 2010)

A third emphasis should be to include information on various forms of debt, especially credit cards and other high cost short-term loans. Students are susceptible to becoming overly reliant on these as they progress further towards their degrees and have more financial burdens (Robb and Sharpe, 2009). A good financial program should also ensure that students are being given information that is relevant to their lives. This will help them make the connections between knowledge, attitude, and their own behaviors. Topics such as retirement planning and life insurance will not have as much of an impact because there is no immediate application. Successful financial literacy programs should also emphasize realistic expectations on paying off long-term debt and future income levels. Often, many students take out too many loans with overconfidence of repayment and in other situations not enough to finish their degree (Novilitis et al., 2006; Charles et al., 2016).

Finally, a successful program must ensure that varied delivery methods are used to communicate with students about financial topics. Peer to peer advisors and various media sources can prove to be successful (Reiter, 2015). This is increasingly important with the need for individual attention and students seeking information outside of a typical classroom setting. However, adequate training and appropriate sources of information would need to be monitored.

Professional Applications

From the perspective of an educator seeking to establish a successful financial literacy program, the research indicates several trends with immediate application. The first is that the content of material covered, while important, will only take the students so far. The goal of teaching financial education is ultimately to help students navigate a complex financial world and make wise decisions. If teachers only focus on content and helping students learn various terms and concepts it will only go so far. Relevant topics that affect students on a daily basis need to be chosen and with a great deal of care. For example, to teach an 18 year old about retirement planning, it may be useful to first cover topics such as time to pay off student loans and research income levels of students with the same degree. Without incorporating these topics, the student is unlikely to begin to see what impact their attitudes and behavior will have on retiring early.

Self-reflection of student's current financial attitudes would also be essential. The research shows that attitudes eventually will translate into behaviors. Many students have already formed attitudes that will harm their views on how to handle decisions regarding money. A successful program would seek to challenge some of these assumptions and the behaviors that follow. For example, students often have failed to categorize what they believe are wants vs. needs. This could lead to interesting discussions and help to form a monthly budget. A reflection on current behaviors could also be useful to see if students are actually spending appropriately on wants, or if it is impacting ability to pay their "needs." This self-reflection on behavior could be essential in developing new and potentially healthier habits.

Another major trend indicated by the research is that student's financial knowledge, attitudes and behaviors are in constant transition from the beginning of their freshman year to their eventual graduation. Many students gain confidence in utilizing different financial tools, and while this could be considered a positive development, it can often cause issues down the line if these financial tools are not be used appropriately. A financial educator needs to continue to reinforce healthy attitudes and behaviors, and potentially revisit certain fundamental financial topics to make sure students have an adequate understanding.

As students approach their senior year, it could be productive to have additional self-reflection activities to assess the changes that have occurred in the last several years regarding their money management skills. Developing a monthly budget and plan to pay off student loan debt could also prove beneficial as students graduate and move on to work environments where these topics will not be covered. Parents could also be engaged during this period to provide accountability to stick to these plans. Overall, teachers need to understand that this period in life is vital to establishing long-term habits that are hard to reverse. A holistic approach should be utilized which engages knowledge of financial concepts relevant to students immediate situation, self-reflection on financial attitudes, and monitoring of behaviors that are being exhibited through day to day decisions.

Limitations of the Research

There are two main limitations from the studies that may skew the results and provide incomplete data. The first is that there appears to be an over-reliance on self reported data. Students were asked to assess their financial attitudes and behaviors mainly through surveys. Information on family background and parents financial situations was also gathered through the students self reporting. While it is possible this data may be accurate, it could prove beneficial to compare this to factual data. For example it would be interesting to gather information from parents and see how this compares to the students submissions. It may help to provide a more accurate picture, as families do not always fully disclose to one another their true financial situations. The research could also be aided by looking at student's loan statements, credit scores, and daily spending habits. It would be insightful to see how truthful or not students were on the surveys, or even how aware they were of their current behaviors.

A second limitation of the current research is that data was mainly collected at one set point in student's lives. Few longitudinal studies were completed to see how financial literacy impacts long-term development in students. For those that did complete a longitudinal study, they were mainly a comparison of freshman versus senior year in college, which is a relatively short period of time. In those studies, it also appears there were significant changes in attitude in behavior, so it could be insightful to see how this plays out into later stages of life. For example, do students that increasingly use short term debt throughout college continue this trend and run up large credit card debts and file for bankruptcy, or do they learn their lesson and realize these forms of borrowing are not ideal.

Implications for Future Research/Conclusion

Future research should take a focus on early life development of financial attitudes and behaviors. Often, these are formed through interaction with parents, as schools are unlikely to provide any financial courses prior to the final years of high school. Often, students seem to develop unhealthy attitudes or have incomplete financial knowledge, which then need to be undone by educators. In some situations, students may fail to develop appropriate plans to finance their education, which puts them at risk of dropping out of college prior to completion of a degree. Earlier interventions seem like a promising solution to this problem and something that could be fairly easily implemented in our school systems. Having students understand how to finance their education should not be left to the final year of high school. Often opportunities for financing will be missed and put students at a severe disadvantage. Courses in practical financial skills could also be introduced at an earlier age and studied to see what long-term effects it has on attitudes and behavior. This could prove especially beneficial for students that do not have positive role models in areas of money management.

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