2-25-2022

Correlation of Personal Finance Class and Credit Scores

Betty W. Fagan
Lindenwood University

Correlation of Personal Finance Class and Credit Scores

by

Betty W. Fagan

A Dissertation submitted to the Education Faculty of Lindenwood University

In partial fulfilment of the requirements for the

Degree of

Doctor of Education

School of Education

Correlation of Personal Finance Class and Credit Scores

by

Betty W. Fagan

This dissertation has been approved in partial fulfilment of the requirements for the

degree of

Doctor of Education

at Lindenwood University by the School of Education

_Bob Steffes______________________________ _02.25.2022____
Dr. Robert Steffes, Dissertation Chair Date

Roger Mitch Nasser Jr . 02/25/2022 .
Dr. Roger Nasser, Committee Member Date

02/25/2022
Dr. Gwen Grooms, Committee Member Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

Full Legal Name: Betty W. Fagan

Signature: Betty W. Brown-Fagan___________ Date: February 25, 2022

Dedication

I dedicate this dissertation to my Lord and Savior, Jesus Christ; I could not have completed this project without him. I was often discouraged and prayed that he would help my brain to heal in order to write one paragragh or a page per day. He woke me up each day and with lots of prayer I was able to complete this paper. I also dedicate this paper to my youngest brother, Cecil, and my mother, Nadine, who are of the heavenly kingdom. They encouraged me to complete this paper and to have faith in myself that I would be able to complete this dissertation. Much love little brother and mom.

This dissertation is dedicated to all of those who have sustained illnesses and fought through them, not believing that they would make it to the end. And also, to those friends and loved ones that lost their lives to Covid-19 and other illnesses.

Acknowledgement

I would like to acknowledge my academic advisor, Dr. Robert Steffes, who guided me through the process and gave numerous suggestions in writing this dissertation. To members of my committee, Dr. Roger Nasser and Dr. Gwen Grooms for reading my dissertation and giving helpful suggestions and keeping me on track. Special acknowlegement to Dr. Sherrie Wisdom; your sense of humor and caring spirit helped me to fight through some of the rough moments in writing this dissertation. To my dear friend, Dr. Carmen Mitchell, who encouraged me everyday to write and to complete the project. To Dr. Cara Weston, who offered suggestions and provided valuable feedback.

Abstract

It is has become a concern: the number of people struggling with personal finance and credit scores. It is for this reason that this study scrutinizes the possible influence of one factor on the other. It is undeniable that personal finance influences some futuristic financial decisions and goals, but has the relationship been proven? This study aims to evaluate the correlation between personal finance and financial literacy, using a sample of 15 to 30 high-school students and teachers. The study collected data through interviews and surveys. The data collected were used to formulate the correlation between the course's success and competency in money management and other financial matters. The significance of the study reiterates the importance of personal finance as a factor influencing adults' financial literacy. The research is structured starting with the introduction in the first chapter and the literature review in the second. The third chapter details methodology, as the fourth chapter details result analysis. The last chapter, Chapter Five, envelops the discussion, conclusions, recommendations, and limitations. Generally, the study found a positive correlation between passing a personal finance class and financial literacy.

List of Figures

List of Tables

Table of Contents

Chapter One: Introduction

Rapid changes in the economy and financial options, such as subprime mortgages and credit cards have significantly increased the level of personal financial responsibility over the previous generations (Henegar et al., 2013; Lusardi, 2015). Many of these changes have affected the younger generations, but may not have impacted the financial decisions of older generations who have already made their major purchases, such as homes, and established their savings and retirement plans. As such, it may be challenging for parents and caregivers to provide their youth with the financial literacy that will be necessary as they transition into financial independence (Sharif & Naghavi, 2020). For example, negotiating a mortgage is considerably different now than a generation ago, making much of the available knowledge obsolete or limited in its application (Sharif & Naghavi, 2020). Among those who have the knowledge to transfer to their youth, challenges may derive from a lack of time, due to work and other obligations or a lack of interest, as demonstrated by the youth (Sharif & Naghavi, 2020). In other words, if the parents are not available or their child does not participate in the knowledge transfer, then no benefits from parental knowledge can be achieved. As a result, many young adults do not have the financial literacy to ensure that they are able to adequately budget and manage their assets to prevent excessive debt and maintain a positive credit score (Kuchler & Pagel, 2021). As credit scores determine the amount of interest that these young adults are required to pay, a lack of financial literacy could result in the loss of thousands of dollars over their lifetime, further contributing to their financial insecurity.

Fortunately, school reform efforts have incorporated financial literacy requirements, albeit inconsistently, which may help to reduce the gap in knowledge for those who are offered or required to participate in these courses (Opletalová 2015; Suetomi 2014). While the inconsistencies may further expand the wealth gap in the nation, these opportunities afford all students within a school setting to access financial literacy courses even if they are not mandated by the state's policies. According to Urban et al. (2018),

> as of 2015, nearly half of states in the United States included some form of a personal finance course as part of their high school curriculum. The public policy motivation for school-based financial education requirements is typically to improve the financial behavior of individuals. (p. 2)

While these courses are not all mandatory, their availability illustrates the importance that policymakers and educational leaders have placed on financial literacy. The researchers went on to explain that the policymakers have recognized that "the naiveté of young people may undermine the assumptions of revealed preference models: young people may lack the self-control and awareness to invest in financial knowledge and underestimate the impact of their current financial decisions later in life" (Urban et al. 2018, p. 2). In other words, by recognizing that the young people are unable to make these decisions without the provision of financial literacy courses, the policymakers have implemented measures intended to help mitigate the negative implications of poor financial decisions.

However, little information is known about how well these programs are being applied in the real-world setting. Although their availability is a positive reflection on the policymakers, the true test of their successes should be determined by the outcomes that the students experience into their young adulthood. According to Lührmann et al. (2015), previous research has indicated that the students have an increased interest in finances and reported fewer spontaneous purchases. As spontaneous purchases are perceived as an emotional response to an item or situation, lessening these while increasing interest in financial matters is a key factor of success. Yet, there were not statistically significant differences in their savings indicating that they were continuing to make poor financial decisions. This continued spending could be related to the emotional attachment to goods and materials, but could potentially be offset by their negative emotional responses to failing to save (Shahrabani 2012).

According to Xiao et al. (2011), psychological processes are at the core of financial decisions among young adults, indicating that spending reflected the communication between their cognitive and psychological interpretation of financial decisions. Research has shown that these rationalizations may have roots in their attitudes about finances and their responsibilities to their financial security (Hancock et al., 2013; Norvilitis & Mendes-Da-Silva, 2013). However, understanding how the perspectives are formed through the presence or absence of knowledge remains elusive.

Based on these considerations, the current study aims to fill the gap in knowledge between the awareness that these health literacy programs are necessary and the uncertainty of application effectiveness in the real-world setting. The study focused on the credit card scores of young adults who participated in financial literacy education in an academic environment. While other factors may contribute to their economic successes or challenges, the financial literacy programs' shared experience will serve as a control to determine its implications. Chapter One presents the introduction to the current study to provide the reader with the background information, overview of key components in the study, and definitions of key terms used throughout the report. The study's purpose and significance are also included, and limitations and relevant details are expanded upon in the subsequent chapters.

Background of the Study

In 2017, Bayley stated that through the term “American Dream," James Truslow Adams tried to depict a life “better and richer and fuller for everyone, with opportunity for each according to [their] ability or achievement” regardless of their class or birth circumstances (p. 42). America was founded on the principle of freedom of religion and speech and the belief that anyone could achieve anything. Consequently, “many immigrants came to the United States in hopes of putting behind the religious persecution, oppression, tyranny, discrimination based on race and social-economic class, or disagreement with laws and the government of their countries of origin" (Wiseman, 2014, p. 2). The idea of altering one’s future meant that everyone could be, do, or achieve more than the generation before them regardless of their place of origin; one just needed to dream, work hard, exhibit morals, and save money, as taught by the older generations.

However, the American Dream started to mean something different for later generations, beginning more than 10 years ago. The ability to pursue a college education and providing for a family has become more difficult for current generations than the previous ones, and the cost is much higher. The values of millennials and Gen Xers are different from those of the baby boomers. Millennials and Gen Xers are more concerned with working fewer hours, finding jobs they like, not wasting resources, and building a community by sharing resources.

According to Bang (2018), however, it may be the youth who can revive the American Dream if given the tools necessary to navigate the economic environment, rather than expecting them to do things the same way as their parents did in a different economy. The researcher noted that those who struggled financially in earlier generations engaged in populism and expected that the government corrects the economy's wrongs. However, the younger generation has become more personally involved through online forums and direct contact to elicit changes in the economic environment that will benefit all people, rather than simply those who have already achieved financial security (Bang 2018). The question, here, is whether this practice is viewed positively or negatively in the perceptions of the older generations. Additionally, this raised how this affects the younger generation's ability to secure their financial security, while also pursuing these external models of the American Dream.

To respond to how the older generation views these pursuits, baby boomers believed that children should secure jobs equal to or better than theirs and provide for their families (Elliott, 2016, p. 1). Baby boomers "primarily used cash ten years ago, but now, credit or debit cards are the means of purchasing items" (Kiger, 2017, p. 1). Notably, many baby boomers, millennials, and Gen Xers struggled with the concepts of personal finance and savings in their everyday lives. Consequently, passing down knowledge and learning used to be critical years ago. Some individuals did not express an interest in learning about credit scores until the latter situation dictated the need. "Often, we do not seek to understand our behavior or attitude toward money until the situation becomes dire" (Bernz, 2019, p. 1).

The second raised question is far more complex and requires a degree of financial literacy. However, from a general context, Bang (2018) explained that when society is uplifted at all levels, then the economic environment is improved for all stakeholders. Therefore, by working on social issues and addressing society's needs, the younger generation effectively improved personal financial opportunities. Engaging in these issues has become a part of reviving the American Dream for all of

America (Bang, 2018). However, it is concerning how they will handle their finances in a continuously growing economy, given a generous nature.

To successfully handle money, one needed to change a mindset and attitude toward money. Accordingly, reading different magazines and articles, as well as researching financial topics could help individuals become aware of spending and saving habits. However, as will be explored through the theoretical framework, having access to financial information is not equivalent to having financial knowledge applied in a changing economic environment. Furthermore, to address financial industry crises, many banks offered tools to keep track of spending and saving habits. These tools can be helpful if the consumer is aware of their relevance to the overall financial plan. Many credit card companies provided services to check credit reports in association with credit reporting bureaus, such as Transunion, Equifax, and Experian. Although the site “Credit Karma” was not a significant reporting bureau, it did allow an individual to check a credit score for free, without negatively impacting their score. Again, these tools are valuable assets when the consumer is knowledgeable about the implications of a financial decision regarding their credit score and its impact on financial security.

Due to the misuse of finances, some adults used their children’s social security numbers to apply for jobs, receive credit cards, or set up an account with a utility company. While this practice is unethical, the financial crisis may have led the parents to have no other choice to provide necessary utilities to their children. This reality speaks of the severity of the implications of poor financial decisions. In this context, Grant (2018) stated:

> The family members of around 60% of children under the age of seven have comprised the child’s social security number, leading them to begin a life in

> debt. Some high school students in the junior or senior years have jobs, a checking account to support family members, and are the breadwinners of their family. These high-school students may also apply for credit cards in the junior or senior year; their journey toward understanding credit begins from that point onward. (p. 1)

Other factors that influenced how families handled finances were knowledge, understanding, and mindset of money. Some families discussed cash in terms of paying bills, owing creditors, and saving money, but not the actual concept of finances and the idea of building wealth. In contrast, many families did not have any idea of finances at all. Pesce (2020) stated that “Many Americans lack financial literacy skills, which have taken a nosedive since the Great Recession, which can lead to mismanaging their money or making poor financial decisions” (p. 3).

Friedman (2019) reported that “Career Builder,” a leading job site, found statistics that indicated "78% of U.S. workers were living pay check to pay check" (p. 1) and reported, “that nearly one in 10 workers making $100,000+ live pay check to pay check” (p. 2). These statistics reflect how many individuals enter into credit agreements without proper financial literacy, as discussed below:

> The knowledge of fundamental terms utilized in financial statements such as daily interest rate, adjusted gross income, budget, cardholder agreement, annual percentage rate, secured credit card, and an unsecured credit card are a few terms that are not readily understood. When contracts were signed to buy a home, a car, and other items, an individual needed to know to understand the agreement to not default on the loan. (Paul, 2018, p. 1)

Parents and the government relied on the educational system to educate children in the area of personal finance. While it was evident that this knowledge was critical, the extent of significance was not weighted heavily enough to evaluate how the schools were achieving this goal. Such importance was highlighted in the following:

> Understanding the meaning of a good credit rating determined an individual's livelihood. Credit scores determined the amount of credit issued, interest rates, and the types of loans that a person may have qualified for when making a purchase. Understanding the different ranges used in a FICO score, the meaning of the ranges, how debt impacted a score, the various accounts, and paying bills when they are due helped individuals make better decisions when appropriate. (Johansson, 2018, p. 2)

In Missouri, personal finance was an entire semester course offered in high school during the junior or senior year, designed to help students develop skills to better their future (Missouri Department of Elementary and Secondary Education [MODESE], 2017, p. 1). In fact, "almost 10% of states received an A rating, which means that the state requires personal finance instruction for a minimum of 60 hours per year as a graduation requirement. These states include Alabama, Missouri, Tennessee, Virginia and Utah" (Morad, 2017, p. 1). The requirement addressed students who were the sole providers for the family, buying cars, and applying for credit cards. Educators understood that providing a course in personal finance to high schoolers would expand fundamental knowledge in money management, budgeting, and savings to benefit students and families. Moreover, providing realistic lesson plans and curriculum would enhance high schoolers' knowledge, skills, and mindsets.

From 2007 when personal finance was introduced, Missouri became one of 17 states that required a course in personal finance (MODESE, 2017, p. 1). Many states instituted the requirement for personal finance, due to the rapidly changing economy and the banking industry's requirement. Moreover, good credit was imperative, because it allowed one to pay less interest on big-ticket items, such as cars, houses, student loans, and credit cards. Further, paying exorbitant interest rates over several years leads to staying in debt and feeling trapped with paying only the minimum amount due.

Purpose of the Study

Many students in rural, urban, suburban, and inner-city settings struggled with finances and understanding credit scores. Therefore, this study examined the retention rates of high-school students regarding the curriculum related to personal finance courses, as required by Missouri, and how these retention rates impacted these students' financial literacy and higher credit score ratings after course completion. After successful course completion, the data collected from the students through surveys and interviews, which were then studied to understand the correlation between the course's success and competency in money management and other financial matters. Furthermore, this study surveyed 15 to 30 students after completing high-school finance courses, no later than five years after their graduation, to ensure that the collected data about personal finance courses were current. The study's significance lies in understanding how a required course in personal finance affects or influences adult financial literacy.

Rationale

Since more individuals went into debt to achieve their dreams of higher education, homeownership, car ownership, and engagement in more financial responsibilities, credit scores became a factor in deciding when a significant purchase is made, and the interest rate assigned. As more high schools required the successful completion of personal finance courses for graduation, more research was needed to understand better the influence of personal finance courses on life after graduation.

Therefore, this research aimed to address a persistent gap in knowledge within the literature concerning the retention of information gained from high-school finance courses and its contribution to the students' financial efficacy after entering adulthood. Many students from rural, urban, and inner-city communities struggled with debt, because their parents had already taken credit in their names, posing significant problems for them (Smith, 2017). The presence of good financial literacy could have been reflected in one's credit score, and therefore, this study defined the measure of economic health for individuals. Tuggle (2012) found that approximately 87% of teenagers "admit they do not know much about personal finance" (p. 1). Moreover, this study showed that "35% of teens want to learn how to save, and 28% of the study participants know that managing a budget is important and want to learn the required skills" (Tuggle, 2012, p. 1). The findings from this study indicated that "nine out of ten teens report that parents were good financial role models according to the survey, while only one out of five parents say they are setting good financial examples" (Tuggle, 2012, p. 1).

Farrington (2017) found if lessons in basic financial literacy were "initiated in elementary school, then students within the high school could learn about more complex financial matters beyond budgeting, savings, and debt" (p. 4). Farrington (2017) further emphasized the need to cover more practical financial concepts in the high-school curriculum, including credit scores, retirement planning, and savings, and make graduation conditional on completing such courses. Moreover, "collegiate level personal finance courses could then be more advanced than aimed at high school students, improving the overall financial literacy within the United States" (p. 4). Students expressed that they did not have a deep understanding of finances, saving, investing, and adequately utilizing credit cards. As such, Beran (2015) discovered that teenagers in the United States were not allowed to achieve competency in financial literacy, as only five states in the country—Alabama, Tennessee, Virginia, Missouri, and Utah—included any personal finance courses in their curriculum (p. 1).

Theoretical Foundations

Two theoretical frameworks were used in this study. The first of these was the Theory of Planned Behavior, which, according to Conner (2020), derived from the Theory of Reasoned Actions. This section achieves the goals of presenting overviews of the theories and a justification for their selection. Firstly, the area suggests the history and details of the Theory of Planned Behavior's constructs and considerations. Next, the section explains how this theory was used in the design of the present study and the data collection and analysis processes involved. The section then provides an overview of the PISA 2018 Financial Literacy Analytical and Assessment Framework and justifies its use in the current study.

History and Overview of the Theory of Planned Behavior

The Theory of Planned Behaviour was developed by Ajzen (1991). According to the theorist, a primary factor within the theory is intention. Ajzen (1991) explained the relationship between intention and motivation in the following excerpt from the theory:

> Intentions are assumed to capture the motivational factors that influence behaviour; they indicate how hard people are willing to try or how much effort they are planning to exert to perform the behaviour. As a rule, the stronger the intention to engage in a behaviour, the more likely its performance. (p. 181)

In other words, when an individual exhibits a high degree of intent, then they are more likely to integrate motivational factors that support their intention and empower them to perform the desired behavior. To this point, according to Madden et al.

(1992), the Theory of Planned Behaviour remains aligned with the Theory of Reasoned Action. The factors of attitude and subjective norms were also in the Theory of Reasoned Action, with only perceived behavioral control and behavioral control added to the Theory of Planned Behaviour. Below, these additional factors are defined.

According to Ajzen (1991), an attitude refers to the overall perception of the individual's behavior, while subjective norms refer to how the individual believes others will perceive the behavior. The third factor in determining the individual’s intention to perform the behavior is perceived behavioral control. This factor refers to how difficult or easy the person believes that the behavior will be. The factor prompts the individual to ask if they can perform the behavior. Finally, the theorist explained that the behavior would only be performed if the individual has the behavior control, even if the intention is high. Ajzen (1991) provides the following details about these relationships:

> Hence, behavioral intention is a linear regression function of attitudes, subjective norms, and perceived behavioral control:
>
> $$BI = w3A+w4SN + w5PBC$$
>
> BI is a behavioral intention, A is an attitude toward the behavior, SN is a subjective norm, PBC was perceived behavioral control, and w3 to w5 are empirical weights indicating the relative importance of intention determinants. The equation suggested that intentions are a function of one’s evaluation of personally engaging in the behavior, one’s perception that significant others think you should or should not perform the behavior, and perceptions of one’s control over the behavior's performance. (p. 173)

In other words, the behavioral intention is dependent on the attitude, social norms, and perceived behavioral control. Conner (2020) explained that “the direct path from perceived behavioral control to behavior is assumed to reflect the actual control an individual has over performing the behavior” (p. 4). When the individual’s perception is accurate, then the behavior intention will be more motivated than when they perceive it to be simple. Still, they do not have the means, knowledge, or resources to perform the behavior. Based on these factors, the theoretical framework can be explained as a process of three influences on behavioral intention. The path from behavioral intention to behavior was directed by perceived behavioral control and actual behavioral control.

Application to the Current Study

According to Ajzen et al. (2011), knowledge influences the attitudes and perceived behavioral control and their actual behavioral control when the knowledge is related to the desired behavior. For example, “uninformed or misinformed, people eat an unhealthy diet and don’t exercise enough, engage in unsafe sex, abuse drugs, and alcohol, fail to protect themselves from the harmful rays of the sun, and pollute the environment” (p. 101). While this assertion is not new to behavioral research, it provided insight into how this theory informed the direction of the current study. For example, Ajzen et al. (2011) differentiated between knowledge and having access to adequate information by applying the definitions to the HIV/AIDS epidemic. Although sufficient data was available about the disease transmission, many individuals may not seek the information without being motivated. Additionally, Ajzen et al. (2011) explained that knowledge refers to analyzing the data for accuracy and applying valid information in practice. This theory is relevant to the current study as a process of identifying the relationship between the perceived behavioral control and the actual behavioral control exhibited by those who have participated in financial literacy education.

Overview of the PISA 2018 Financial Literacy Analytical and Assessment Framework

This model was developed in 2012 out of an international study designed to evaluate fiscal literacy among young people (Sälzer & Roczen, 2018). Soon after its inception, the framework became a pillar upon which financial educators in countries have designed financial literacy curricula to ensure that young people are equipped with updated financial knowledge to navigate the increasingly dynamic and challenging financial (Ozkale et al. 2020). Further, She et al. (2018) noted that the PISA 2018 framework for financial literacy takes into account the challenges presented by emerging economies, technological innovations, the dynamism of financial institutions, and the financial marketplace in the age of financial digitalization to recommend the most appropriate strategies upon which to design youth financial literacy programs.

The framework incorporates the dimensions of responsibility, competence, knowledge and understanding, and enterprise (Ozkale et al. 2020). The framework's foundation was identified through the relationship between mathematical literacy and financial literacy, with a strong correlation recognized in the research. She et al. (2018) the relationships between contexts, knowledge, attitudes, and competencies and provided definitions for each of these factors. According to She et al. (2018), contexts including personal, local, and global require the individual to display competencies. The researchers then defined these displays in science as explaining a phenomenon, evaluating and designing scientific inquiries, and interpreting the data. She et al. (2018) added that the way an individual does this is determined by knowledge, including content, procedural, and epistemic along or attitudes, such as environmental awareness or an interest in the subject. When applied to mathematics, She et al. (2018) explained that the individual must perceive the problem in context, formulate a mathematical problem, employ the results, interpret the results, and evaluate the outcome. Translating this application to financial literacy relates the issue in context to financial decision-making and assessed the effects of serving as motivation to continue or alter their behaviors.

Application to the Current Study

The four dimensions have guided the study's design and served to establish the process of analyzing the data. By determining the level of knowledge retention, it will be possible also to determine if the financial literacy programs have long-term implications. The competence dimension and the enterprise dimension informed the researcher about the degree to which the students can adapt their knowledge in a changing economy. Finally, the responsibility dimension will consider personal and self-care in financial decision-making.

Summary and Application of Two Theories

The current section has presented Two theoretical frameworks that have supported this study. While these theories will notably be expanded on in Chapter Two, their introduction was intended to provide a clearer understanding as to the direction of the study. The first of these was the Theory of Planned Behavior. Secondly, the PISA 2018 Financial Literacy Analytical and Assessment Framework supported the research. This section achieved the goals of presenting overviews of the theories and a justification for their selection. Firstly, the section presented the history and details of the Theory of Planned Behavior's constructs and considerations. Next, the section explained how this theory was used in the design of the present study as well as in the data collection and analysis processes involved. The section then provided an overview of the “PISA 2018 Financial Literacy Analytical, and Assessment Framework” (Sälzer & Roczen, 2018). and a justification for its use in the current study.

Multiple overlaps within these theories helped to identify the ability to utilize the theories together, while the different approaches assisted the researcher in the decision that both were necessary. For instance, both theories emphasize attitudes and knowledge. As the current study aims to understand retained knowledge, the difference between access to information and competencies becomes the primary determiner. Yet, as noted in the Theory of Planned Behavior, how the individual decides to proceed is more reflective of their behavioral intention, which is impacted by their attitudes. This relationship strengthens the emphasis on responsibilities in the “PISA 2018 Financial Literacy Analytical and Assessment Framework” (Sälzer & Roczen, 2018).

Research Questions

Since financial literacy remained low for high-school students in the United States, it had been well established that participation in personal finance courses helped students attain financial knowledge. However, proving an increase in financial literacy had not been accomplished.

RQ1: What financial information was retained by students after taking a personal finance course and why?

RQ2: Which areas in the personal finance course do high school students need to have addressed at the college/university level?

RQ3: Should personal finance courses be taught at the high school or collegiate level or both?

Limitations

This study did not address the students who took a personal finance course online or through a virtual environment. Many high schools offered various online courses or virtual environments in the area of personal finance to address the students' learning styles or abilities. Research had been conducted to address gender in the study of personal finance. However, this researcher will not be addressing gender in this paper.

Definition of Terms

Credit scores: One's credit history (types of credit – 10%, new accounts – 10%, the length of credit history – 15%, amount owed – 30%, and payment history – 35%). A credit score is a report card on how responsibly an individual manages their financial obligations; "a credit score is a numerical expression based on a level analysis of a person's credit files, to represent the creditworthiness of an individual" (Credit Cards, 2019, p. 1). Business institutions, such as banks, insurance companies, rental car companies, and credit card companies use credit scores to determine an individual's ability to pay back loans and interest rates.

Debt management: The amount of currency due to another individual; "the act of managing debt" (Georgia State University Student Financial Services, 2017, p.1).

FICO scores: A credit score developed by the company FICO, whose original name is the Fair Issac Company. "All three major credit reporting companies report FICO scores – Equifax, Experian, and Transunion based on five factors: payment history – 35%, age of credit – 15%, new inquiries – 10%, types of credit – 10%, and the amount of debt owed – 30%" (Brinkley-Badgett, 2018, p. 1). An individual FICO score can range from 300 to 850, with a higher score indicating less risk.

Financial education: The acquisition of skills and knowledge needed to identify responsible financial decisions best;

> the process by which people improve their understanding of financial products, services, and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being, (The President's Advisory Council on Financial Literacy, 2008, p. 10)

GradSense: A digital resource for students that stresses the responsibility associated with financial matters; "an online tool designed to help students plan financially for their education and future" (Council of Graduate School, 2014, p. 1).

Personal finance: A money management system utilized by an individual or a family to budget their household funds, including expendable income, debts, and savings; "the application of the principles of finance to the monetary decisions of an individual for the family unit over time, taking into account varies financial risks and future life events" (Georgia State University Student Financial Services, 2017, p. 1).

Personal financial literacy indicates the ability to make reasonable and correct decisions about spending, savings, and investing money; "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being" (The President's Advisory Council on Financial Literacy, 2008, p. 10).

Summary

As per the "2018 Survey of the States: Economic and Personal Finance Education in our Nation's Schools," conducted by the Council for Economic Education, "only 17 states require that [a] high schooler take a personal finance class" (as cited in Frazier, 2019, p. 1). Many students will go to college after high-school graduation and finance their college education by taking out student loans and be left in debt after graduation. Frazier (2019) reported that in the class of 2018, “69% of college students took out student loans, and […] graduated with an average debt of $29,800” (p. 2).

A successful American Dream was to be able to buy a house and a car and have a middle-class range lifestyle. However, it was problematic that parents were not teaching their children about finances and the importance of understanding how to handle finances. Young millennials and Gen Xers desired instant satisfaction. “The concepts of savings and investment are foreign to most and living pay check to pay check has become the norm” (Pesce, 2020, p. 2). Understanding simple financial terms, such as compound credit annually and figuring out interest rates and how long it would take to pay off a bill, was very difficult for most. Furthermore, credit card statements had to report the minimum amount due, the due date, and how long it would take to pay off the remaining amount after the minimum had been paid (Irby, 2020, p. 1).

Chapter Two: Review of Literature

Introduction

The ambition to pursue the American Dream has driven many. Nonetheless, achieving such a status has remained elusive despite the belief implanted that individuals could achieve fuller and richer life experiences; their class and birth backgrounds notwithstanding (Coskuner-Balli, 2020). The frustrations experienced by hundreds of thousands, if not millions, while attempting to acquire augmented socio-economic standings can be attributed to the fact that such achievements, though not solely determined by class backdrops have become tied to the personal finance mystery. According to Widyastuti et al. (2020), the influences of the personal-finance concept on the ability of individuals to achieve higher economic heights and subsequently better social status were heightened by the introduction of credit scores. Thus, the inability to interact with or handle debt has become the undoing of many in the pursuit of financial success and liberation.

Although people in previous dispensations have worked hard to improve their lives financially, the inability or unwillingness to learn about the influences of credit scores on their financial standing has continually made it impossible for them to obtain their desired levels of financial and economic standing. Commenting on the phenomenon, Salinas and Hidrowoh (2018) stated that previous and current escalations in financial problems have often forced individuals to look up to lending institutions for loans that are issued based on the persons' attitude or behavior towards monetary-related debts. Unfortunately, most people never attempt to learn about credit scores until they find themselves in dire situations. Even so, a notable number of those that seek financial literacy in relation to credit scores are often late and in no position to improve their credit standings with lending institutes.

The ability of individuals and families to acquire financial wealth and freedom, which is a significant contributor to attaining the American Dream, no longer relies singlehandedly on effort. The persistent global fiscal crises have undeniably forced individuals to rely on lenders and financial institutions for better livelihoods (Hütten et al., 2018). Thus, insightful and updated knowledge on the necessity of a good credit rating has become key to achieving dreams. Explaining the phenomenon, Urban et al. (2018) and Kim et al. (2020) indicated that credit scores determine the loan amounts received, loan types available, and interest rates at which people can obtain credit financing from banks. The correlation between personal monetary habits and credit scores has thus become a paramount determinant in the achievement of personal dreams (Santini et al., 2019). However, the components of knowledge, money mindset, monetary attitudes, and financial understanding may never be as effective as is expected, if not taught at an earlier age. As such, the realization that people need to acquire financial literacy earlier in life has led governments to introduce personal finance courses in high school, during the junior or senior year.

First among the numerous U.S. states that have adopted this financial empowerment strategy was Missouri, after the law was passed in 2006. Affirming the necessity of this initiative, Widyastuti et al. (2020) noted that providing a course in personal finance to high schoolers would expand fundamental knowledge in money management, budgeting, and savings, to benefit students and families. While owing to the increased focus of banking institutions on the credit scores element, other states followed suit. However, years have passed, and graduates have continued to find themselves in financial trouble staying in debt and feeling trapped because they consistently afford to pay the minimum amounts due after acquiring student loans, cars, credit cards, and houses (Arrondel, 2018; Widyastuti et al., 2020). Such outcomes are disheartening and inconsistent with the need to educate individuals at an early age concerning financial matters. As suggested by Salinas and Hidrowoh (2018), the poor credit scores exhibited by individuals who went through personal finance courses during high school raised questions regarding the ability of high school students to retain knowledge acquired during financial courses and the age appropriateness at which such courses were offered.

Most of the literature was published between 2017 and 2021, to ensure that the latest findings and reports were included in the review. To expand the insight into the theoretical framework, older articles that were pertinent to the model were included. Older articles were also used in the theoretical framework of the study to reflect the seminal studies on the "PISA 2018 Financial Literacy Analytical, and Assessment Framework" (Sälzer & Roczen, 2018).

In this literature review, the researcher will expand on the background of the study, as provided in the earlier chapter. The first section will identify the search strategy used to acquire literature for writing the literature review. The second section will focus on the theoretical framework for the study, which is the "PISA 2018 Financial Literacy Analytical, and Assessment Framework" (Sälzer & Roczen, 2018). Next, relevant studies will then be organized into categories, progressing from the broad subject matter towards the gap to be studied. In this process, six major sections will be discussed. These are namely; (a) history of credit reporting of FICO Scores, (b) factors determining students' retention of financial information after taking personal finance courses, (c) the influences of personal finance courses offered in high school, (d) personal finance and credit scores, (e) designing personal finance courses at the college/university level, and (f) why personal finance courses should be taught at both high school and college.

Theoretical Framework

The framework chosen for the current study is the “PISA 2018 Financial Literacy Analytical, and Assessment Framework” (Sälzer & Roczen, 2018). This model was developed in 2012 out of an international study that was designed to evaluate fiscal literacy among young people (Sälzer & Roczen, 2018). Soon after its inception, the framework became a pillar upon which financial educators in countries have designed financial literacy curricula to ensure that young people are equipped with updated financial knowledge to navigate the increasingly dynamic and challenging financial landscape (Ozkale & Ozdemir Erdogan, 2020). Further, She et al. (2018) noted that the PISA 2018 framework for financial literacy takes into account the challenges presented by emerging economies, technological innovations, the dynamism of financial institutions, and the financial marketplace in the age of financial digitalization to recommend the most appropriate strategies upon which to design youth financial literacy programs. Taking the form of a multi-disciplinary model, the framework considered the dynamics of the evolving world to determine design implications and evaluate the effectiveness of current financial education programs designed for young people (Cordero et al., 2020).

The framework encompasses several dimensions to ensure that youth financial literacy programs adopt timely and dispense relevant directions. These dimensions comprise responsibility, competence, knowledge and understanding, and enterprise (Ozkale & Ozdemir Erdogan, 2020). The interrelationships between these dimensions make the framework expedient for the current study. As indicated by Moreno-Herrero et al. (2018), the PISA 2018 financial literacy frameworks merge to help acquire insights into pertinent issues in spending, such as income levels, liability, value, competition, power, and exchange (Ozkale & Ozdemir Erdogan, 2020). Below is a recap of the usefulness of each of the dimensions based on the current study.

- Knowledge and understanding - this dimension is concerned with the consequences of individual spending decisions in relation to the forms and features of money (She et al., 2018).
- Competence - this dimension is concerned with equipping individuals to apply acquired financial knowledge given the changing economic contexts (Cordero et al., 2020).
- Enterprise - this dimension is concerned with ensuring that fiscal literacy programs are designed to ensure that recipients can seize opportunities to enhance financial capabilities and manage monetary risks when faced with financial decisions (Sälzer & Roczen, 2018).
- Responsibility - this dimension has to do with equipping apprentices to ensure that their financial decisions reflect the need to care for self and immediate others (Sälzer & Roczen, 2018).

Ozkale and Ozdemir Erdogan (2020) found the PISA framework useful when examining the correlation between mathematical literacy and financial literacy. The study was based on the usefulness of the framework in evaluating mathematical literacy since 2000, although the PISA was found useful in such evaluations before the inclusion of the financial literacy element in 2012. Having noted the possible link between mathematical and financial literacy, Ozkale and Ozdemir Erdogan (2020) designed financial and mathematical literacy questions that were subjected to analysis to help pinpoint the four underlying interactions. The researchers utilized 17 PISA framework questions comprising financial literacy questions and 13 questions on mathematical literacy. Acquired results indicated that although mathematics literacy formed a strong foundation for a sound and practical financial literacy. Additionally, Ozkale and Ozdemir Erdogan (2020) also discovered that retention problems among students were indicative of possible future issues in financial literacy.

The rationale for the utilization of the PISA 2018 framework in the current study was founded on the four dimensions covered by the model. For instance, the knowledge and understanding dimension (She et al., 2018) can prove useful in capturing the element of knowledge retention among students, which later determines their practical understanding of credit scores. Additionally, the competence dimension of the PISA 2018 framework, which deals with equipping individuals to apply acquired financial knowledge, given the changing economic contexts (Cordero et al., 2020), will be useful in determining whether the personal finance issues in relation to credit scores were influenced by the impacts of personal finance course curricula on the retention capabilities of students. Similarly, the enterprise dimension, which equipped individuals to apply acquired financial knowledge given the changing economic contexts (Cordero et al., 2020), will guide the study to evaluate the influences of student retention capabilities and curricula effectiveness in ensuring that students acquire the anticipated levels of financial literacy and understanding of credit scores after completing their courses. The use of the framework in the current study was further justified by its resourceful responsibility dimension. Since the dimension deals with equipping apprentices to ensure that their financial decisions reflect the need to care for self and immediate others (Sälzer & Roczen, 2018), it will prove expedient in examining whether current personal finance courses facilitate the desired knowledge retention rates among students.

History of Credit Reporting of FICO Scores

Credit scores began in the 1800’s with business lenders concerned with evaluating businesses' creditworthiness, and not consumers. “Local merchants would share and maintain lists of individuals who were high credit risks, and merchants offered credit to people who were not on the lists” (Anderson, 2012, p. 2). According to Kaufman (2018), “The Mercantile Agency was formed and solicited information from businesses throughout the country to systemize a borrower’s “character and assets.” Two companies named Dun and Bradstreet merged, and the alphanumeric system for credit evaluation was created” (p. 2).

In the 1900s, as more individuals desired to move to the middle class, companies had to determine a way to evaluate consumers' creditworthiness and businesses. One of the companies, Atlanta's Retail Credit, collected data on individuals’ habits, such as their social, political, and sexual orientation, as reported by Kaufman (2018, p. 3). “The government determined that it was inappropriate for Atlanta’s Retail Credit (RCC) to collect such data on consumers, and Atlanta’s Retail Credit (RCC) which later became Equifax in 1975, had to delete information concerning individuals’ sexual, race, and disability” (Kaufman, 2018, p. 3).

> To interpret and compare data Equifax decided to work with a tech company founded by Bill Fair (an engineer) and Earl Issac (a mathematician) and utilized an algorithm they developed. reported that in 1956, Bill Fair and Earl Issac used their name to formed the company, FICO, utilizing an algorithm to determine an individual’s risk factor.” (Kaufman, 2018, p. 3). “The FICO was passed as a law and was traded on the New York Stock Exchange in 1986. The basic FICO score range is 300 to 850. (Kaufman, 2018, p. 3)
>
> Transunion was the second of the Big Three to report credit scores. Founded in 1968 by Jacob J. Vandergrift as the holding company of Union Tank Car, a

> railcar transportation equipment company headquartered in Chicago, Illinois. Transunion's credit began with the purchase of the Credit Bureau of Cook County (CBCC) in 1969 when they began acquiring regional and major city credit bureau. Transunion became the first company in the credit reporting industry to replace accounts receivable data with automated tape-to-disc transfer, cutting time and cost to update consumer files and was the first online information storage and retrieval data processing system. They have over 250 offices in the United States, as well as in 24 other countries. Transunion also sells credit reports through Truecredit.com and also does employment screens through Transunion's PEER (Pre-Employment Evaluation Report), healthcare evaluations, and a whole range of data-driven business risk management solutions. (Welsh, 2008, pp. 3-4)
>
> Experian, the last of the Big Three, was founded in England in the early 1800s by a group known as the Manchester Guardian Society, which shared information on citizens who did not settle their debts. In 1960 two aerospace engineers guessed that currency would transition into credit form and formed a credit information unit branch known as TRW Information Services. (Anderson, 2012, p. 4)

"In 1966, Brian Capital and Thomas Lee Partners acquired TRW, and Experian is Launched. Experian had the longest-tenured among the "big three" credit bureaus and had a presence in 36 countries" (Key Credit Repair, 2021, p. 2).

Credit Karma is a small credit bureau that consumers can access online to check credit scores daily without paying for a membership, unlike the "Big Three," which offers a free credit report once a year. If consumers would like to check credit scores every day with the "Big Three," membership is required to access the account online. A person's credit score could vary from each credit bureau, due to each bureau using different factors to determine an individual credit score. Credit Karma did not use the FICO or Vantage Score that the “Big Three” companies used.

> The three major credit-reporting agencies — Equifax®, Experian®, and TransUnion® — teamed up in 2006 to create the independently managed firm to Vantage Score Solutions, which just released the fourth and latest version of its credit scoring model, the Vantage Score 4.0 while Vantage Score 3.0 is still used, (Devaney, 2020, p. 2)

FICO score was used by 90% of top lenders because of its strong history and reliability. FICO Score 9 is the most current and predictive FICO Score available (Kaufman, 2018, p. 3).

“Today the number of people needing credit continued to grow, and two billion data points are entered every month into records in the United States, and approximately one billion credit cards are actively being used” (Anderson, p. 3. 2012). The “Big Three” credit bureaus each chose which type of credit score is used, either FICO or Vantage Score, and “consumers have several different versions of a credit score with different modes (or calculations) for scoring your credit” (Tak, 2019, p. 1). Vantage Score 3.0 is essentially a competitor of the FICO Score (Tak. 2019, p. 1). “The Vantage Score algorithm was developed in 2006 to compete against FICO and was “developed jointly by the three major credit bureaus Experian, Equifax, and Transunion” (Ward, 2020 p. 1). “At first the model followed a different scale than FICO but soon realized it was difficult to compete with FICO and had to adjust their scoring model to reflect a similar scoring range as the FICO Score” (Tak, 2019, p. 2).

> The Vantage Score prefers to stay away from exact percentages when it comes to the weight of factors in determining the score. It used factors, such as

payment history extremely influential, while recent credit behavior and debt are less influential. The Vantage Score factors weighted are payment history – 41%, credit age, and variety – 20%, credit usage – 20%, balances – 11%, recent credit applications – 6%, and available credit – 2%.” (Tak, 2019, p. 4)

The Trans Union Vantage Score Range is weighted differently from the FICO scores, as noted in Table 1.

Table 1

Trans Union Vantage Score Range

Ranks	VantageScore 3.0	National Vantage Score Averages in Each Rank
A	781 to 850	74% to 100%
B	720 to 780	52% to 73%
C	658 to 719	35% to 51%.
D	601 to 657	22% to 34%
F	300 to 600	1% to 21%

The Key differences between VantageScore and the FICO score are as follows. VantageScore took less time to establish 1 to 2 months after opening an account, and FICO takes six months. Vantage Scores took into account recurring monthly payments (rent, utilities), while FICO may not score this type of account. VantageScore weighed late mortgage payments more heavily than other late payments. Vantage Scores makes allowance for consumers impacted and affected by general disasters (Tak, 2019. p. 3). A sample of average VantageScore vs. the average FICO score by generation. (Tak, 2019. p. 6).

Table 2

Average Vantage-Score Versus Average FICO 1

Age Group	Average Vantage-Score	Average FICO Score
Millennials	40% Received a C Score or Above 719+	41% Received a Good Score: 670+
Generation X	48% Received a C Score or Above 719+	50% Received a Good Score: 670+
Baby Boomers	54% Received a C Score or Above 719+	52% Received a Good Score: 670+
Silent Generation	58% Received a C Score or Above 719+	59% Received a Good Score: 670+

The Federal Trade Commission clearly states that every company can use a unique scoring model, and different companies can use different scoring models for different types of credit or loans. Companies have a choice to create their scoring model or used a scoring model created by a third- party like FICO or VantageScore. (Milan & Bringle, 2019, p. 2).

FICO scores differ from credit scores.

The higher a FICO score, the stronger the credit worthiness. Credit scores determined without the FICO formula can be higher than the FICO score but indicate weaker credit worthiness. When the FICO formula is applied across the three major credit bureaus, the scores may vary because each reporting bureau may have different information. (James, 2017, p. 2)

The model developed by the FICO scores factors are very similar to VantageScore, but the order of importance is different. Payment history accounts for 35% of your credit score regardless of the type of account, but VantageScore penalizes late mortgage payments more than it does other types of credit. Both FICO and VantageScore have different rules for how multiple credit inquiries within a set period are treated. FICO treats all student loan, auto, and mortgage inquiries within a 45-day window as a single hard inquiry, and with VantageScore, the window is much shorter.

Luthi (2021) stated, “To generate a score, FICO required that you have at least one account opened for six months or more and at least one account reported to the credit bureaus within the previous six months,” (p. 4).

> The impact of collections varied from FICO and VantageScore greatly. VantageScore ignores all paid collection agency items on a credit report, but FICO depends on whether the rest of your credit history was mostly positive or negative, and if it was a recent collection, the more it will hurt the FICO score which stayed on your credit report seven years. (Tak, 2019, p. 5)

Figure 1

FICO vs. Vantage Scores

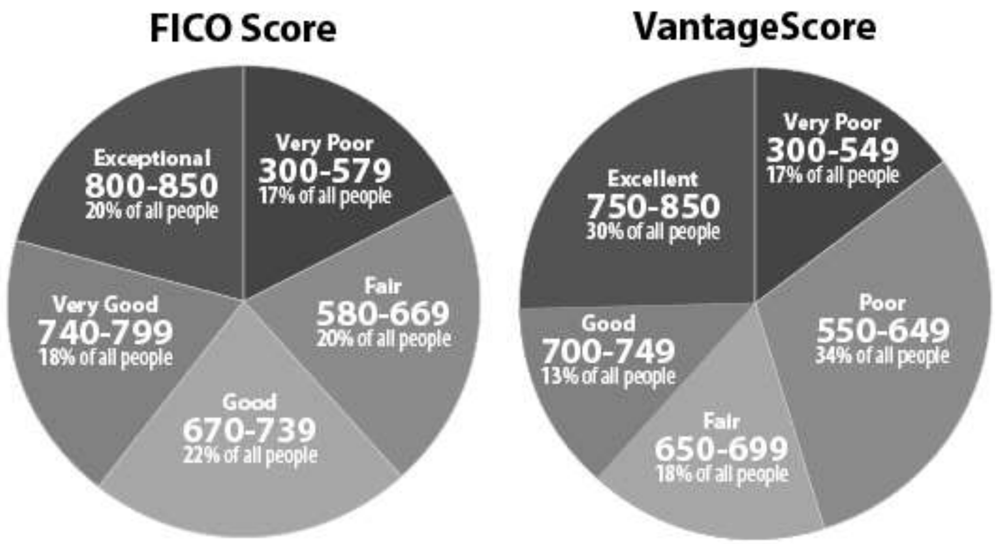
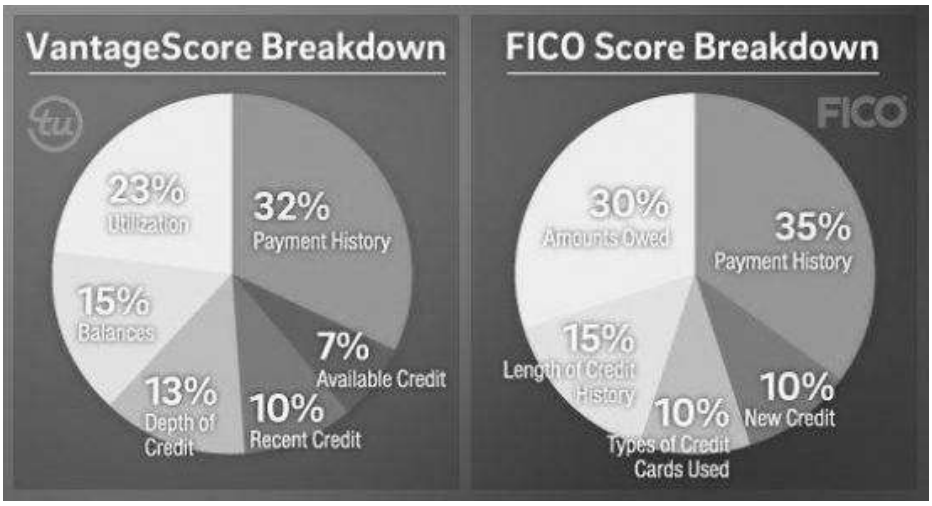


Figure 2

VantageScore vs. FICO Score Breakdown



> Most major card issuers now give cardholders free access to their credit score, whether FICO or another version. Years ago, your FICO score was a secret that lenders didn't want you to know. Then the Fair Credit Reporting Act enabled you to request your credit score from the credit bureaus, but you had to pay for it. Now we're in the free score era. In 2013, Fair Isaac Corp., the company that created the FICO score, launched its FICO Score Open Access program, which allowed lenders to give their customers free FICO scores. (Cannon & Hurd, 2020, p. 1)

The next year, the Consumer Financial Protection Bureau called on major credit card issuers to offer free credit scores to their customers, and many of them now do. Here's where the largest credit card issuers stand (see Table 3).

Table 3

Which Credit Card Issuers Offer Free Scores?

Issuer	Free Credit Score Type	Who Can Get It
American Express	FICO	Anyone
Bank of America	FICO	Cardholders
Barclaycard US	FICO	Cardholders
Capital One	VantageScore 3.0	Anyone
Chase	VantageScore 3.0	Anyone
Citi	FICO	Some accounts
Discover	FICO	Anyone
US Bank	VantageScore 3.0	Account holders
Wells Fargo	FICO	Customers with consumer credit accounts

Note: FICO scores provided by different credit card issuers may vary. That's because issuers get FICO scores from different consumer credit bureaus. Each bureau collects consumer account data independently, and it calculates scores based only on the data it has collected.
Source: (Cannon & Hurd, 2020. p. 2).

Factors Determining Students Retention of Financial Information

Visual Aids and Instructional Videos

The demanding nature of finance courses require instructors to shift from the traditional chalk and talk approach to visual aids to augment student recall capabilities (Schneider et al., 2020). Wang and Antonenko (2017) carried out a study in which they investigated the possibilities of enhancing student recall capabilities using instructional videos and discovered that recall rates were improved by the presence of instructors in the videos. They also indicated that instructor presence was stronger in enhancing student recall, as opposed to the use of visual aids or video in which the instructors are absent. However, they also noted a gap in literature underpinned by the inability of current literature to clarify how the presence of instructors improves the visual attention of learners and the exact mechanisms through which such improvements take place. Having noted this gap, Wang and Antonenko (2017) engaged to explore the influences of instructor presence on the visual attention on the learning capabilities of students in relation to perceived mathematics learning. The select 36 participants were allowed to watch mathematics videos. The findings of this study indicated that the presence of instructors in instructional videos enhanced both student recall capabilities and perceived satisfaction and learning. These results are consistent with the findings of a study conducted by Schneider et al. (2020) to determine the role of memory cues used in pictorial learning in augmenting the ability of students to retrieve information. The researchers used an experimental series to investigate whether decorative pictures, when used as memory cues, influenced learner recall capabilities. Schneider et al. (2020) found out that the use of decorative pictures alongside texts enhanced the ability of learners to retain and recall information.

Personal finance courses have often proved challenging for lower high school students, thus the need to deploy visual aids to improve their memory retention (Vanichvasin, 2021). Ho and Intai (2018) examined the efficiency of deploying audio-visual aids while teaching lower secondary school students. The study took the form of a quasi-experiment, with the researchers deploying survey instruments to facilitate in-depth insight into students' perceptions concerning audio-visual instructional aids. Thirty participants took place in the study, with 15 of them placed in a control group and 15 in an experimental group. Unlike the participants in the experimental group that was subjected to audio-visuals, their control group counterparts were taught with the conventional talk and chalk method. Assessments were then issued to determine variations in student learning outcomes.

Ho and Intai (2018) discovered that students in the experimental group outperformed their control group counterparts that experienced teaching through conventional talk and chalk methods. The researchers concluded that audio-visual aids were best suited to enhance student recall capabilities in lower secondary school curricula. These results are consistent with the findings of a study conducted by Vanichvasin (2021) to determine the place of visual communication in relation to enhancing the memory and recall of Thai undergraduate learners. The researchers selected 19 participants from Thai's undergraduate program to explore the effectiveness of visual communication on memory augmentation using questionnaires on their current courses and a different set of questionnaires on visual communication. Vanichvasin (2021) discovered that the embodiment of visual aids in the questionnaires generated positive results in relation to the augmentation of student memory and enhanced student-learning capabilities.

Nature of Feedback

The close association between instructor feedback and student recall abilities implies that the memory of students in personal finance courses can be improved through careful selection of instructor feedback mechanisms (Iwaki et al., 2017). Cutumisu and Schwartz (2018) carried out a study to investigate the influences of critical feedback on the memory of students. The research was also aimed at investigating the influences of choosing against receiving feedback on students' learning outcomes. Adopting the form of a correlational study, the researchers engaged in the collection of data concerning student feedback-seeking and also revised posters in relation to 106 middle school students that were generated from a digital evaluation game that allowed each of the participants to design posters. The results indicated that when presented with the opportunity to choose between confirmatory and critical feedback, the students' memories were enhanced in the case of critical as opposed to confirmatory feedback. Cutumisu and Schwartz (2018) also yoked this experiment to a similar study in which they assigned critical feedbacks to college/university students. Results from this experiment indicated that students that were issued higher echelons of critical feedback outperformed those that were issued with lesser levels. The researchers concluded that critical feedback is best suited for enhancing student recall capabilities. In a similar study, Iwaki et al. (2017) investigated the influences of delayed corrective feedback on student recall and acquisition of correct information. The researchers studied the phenomenon based on the interference-perseveration model that suggests that providing immediate feedback generates recall issues and paves way for wrong responses. From this perspective, Iwaki et al. (2017) explored the correlation between immediate feedback and hindered recall. The researchers concluded that delayed feedback triggered enhanced memory whereas immediate feedback led to the inability to retain correct answers.

The Influences of Personal Finance Courses in High School

Sound Financial Decisions and Credit Score

Financial behaviors are often backed up by sound and timely financial decisions for individuals to improve their credit worthiness (Lusardi, 2019). Urban et al. (2018) carried out a study to investigate the impacts exerted by financial policies and financial courses offered in high school on prospective financial behaviors. The study was guided by the researcher's acknowledgment of the policies that require every student to undertake personal finance courses before graduating from high school. Thus, Urban et al. (2018) estimated the possible effects generated by such requirements on credit reports of individuals aged between 18 and 21 years, since this lot was on the verge of establishing financial autonomy. The researchers discovered that the financial education in high school, which was supported by strong fiscal education requirements, linked to fewer default occurrences and better credit scores for the population under study. Nonetheless, they noted that the general findings masked critical heterogeneity in light of the country's population capabilities concerning the soundness of financial decisions and attainment of credit scores. These results are consistent with the findings of a study conducted by Lusardi (2019) to determine the necessity of financial education and literacy by considering the associated implications. The researchers examined the place of personal finance courses offered at the high school level in relation to the prospective capabilities of graduates to make sound decisions on financial investments and their propensity to seeking fiscal advice. Lusardi (2019) concluded that financial education for high school students turns them into financially knowledgeable individuals that make financially sound decisions leading to higher credit scores.

One of the chief objectives of financial courses is to equip learners with both objective and subjective knowledge dimensions, which are necessary for making appropriate financial choices (Johnson et al, 2021). Deenanath et al. (2019) utilized the family financial socialization framework to investigate the behaviors exhibited by high school students during the study and after graduation. The researchers compared the results with the influences of personal finance courses on later financial behaviors. The study encompassed 4,473 high school participants comprising 45% seniors and 51% females. Deenanath et al. (2019) leaned on a path analysis approach to test the conceptual relationships as exhibited by the family financial socialization, high school financial courses, and the future financial behavior of high school graduates. The researchers discovered that although purposive financial education or socialization at the family level was essential to the acquisition of financial literacy, personal finance courses offered at the high school level were more suited to enhance financial behaviors and improve credit scores, due to the acquisition of sound and subjective fiscal knowledge. In a similar study, Johnson et al. (2021) investigated the prospective influences of online-based financial education on the financial literacy and knowledge of students in middle school. The researchers leaned on a quasi-experimental paradigm to evaluate the influences expected to be exerted on students taking into account the components of financial knowledge, financial attitudes, and financial behaviors relative to future credit scores. Johnson et al. (2021) discovered that gains were significant relative to each study component and concluded that online-financial courses would improve financial decision-making capabilities and consequently credit scores and prospects in financial well-being.

Financial Literacy

Financial courses offered in high school have been founded on the assumption that learners are incapable of making investment decisions without acquiring financial literacy to appreciate and understand numbers (Bellofatto et al., 2018). Skagerlund et al. (2018) investigated the factors underpinning financial literacy as offered in educational institutions to determine their influences on later financial behaviors in the lives of individuals. The researchers issued a large survey to representative samples encompassing participants chosen out of the Swedish population. Regression models were used for analysis based on the assumption that numeracy serves as a chief factor when determining levels of financial literacy. Particularly, Skagerlund et al. (2018) focused their study on determining the place of emotional and cognitive factors in relation to the acquisition of sound financial literacy. The researchers discovered that turning individuals into financially literate citizens depended on the ability of instructors and curricula to foster understanding concerning numbers.

Skagerlund et al. (2018) also found out that financial literacy is acquired when individuals can carry emotional attitudes concerning numbers without allowing the attitudes to interfere with their financial decisions and monetary activities. These results are consistent with the findings of a study conducted by Bellofatto et al. (2018) to determine the influences of subjective financial literacy, as offered in education institutions on the financial behavior of retail investors. The researchers investigated the trading behaviors of retail investors in relation to the financial knowledge acquired from taking finance-related courses at both high school and college levels. Bellofatto et al. (2018) concluded that the levels of financial literacy attained after undertaking, such courses determine whether retail investors will make sound financial judgments when faced with challenges in financial markets.

Personal Finance Courses and Credit Scores

Alternative Financial Services

Financial courses offered at both high school and college levels greatly determine whether individuals will be able to establish and sustain profitable engagements with financial lenders (Pak, 2018). Harvey (2019) considered the influences of fiscal education in relation to the decisions made by younger consumers when engaging alternative financial services (AFS). According to the researchers, young adults were more likely to engage in such institutions, but their inability to exercise financial discretion led them into credit issues that eventually affected their credit scores negatively. The researcher pooled data from the years 2012 and 2015 NFC studies to investigate whether financial education, as mandated by U.S. states determines the approaches adopted by young people while engaging AFS. Harvey (2019) found out that education in matters related to finances, as provided in high school and colleges, improved individuals’ credit scores by enabling them to make sound financial decisions that are reflected in reduced borrowing. The researchers also discovered that state-level mandated financial education augmented financial literacy and enhanced the capacity of individuals to plan. These results are consistent with the findings of a study conducted by Pak (2018) to determine whether financial literacy correlated to high or low borrowing trends and borrowing costs. The researchers investigated the relationship between borrowing contracts signed by modern-day consumers and the levels of financial literacy. Pak (2018) found out that consumers with established financial knowledge acquired from high school and college were less likely to fall prey to AFS contracts that exert unnecessary weight on their credit scores.

Individual levels of financial literacy determine how individuals engage in payday loans (Nejad & Javid, 2018). For instance, Kim and Lee (2018) carried out a study to investigate the correlation between financial literacy levels in the United States and the engagements of individuals with AFCs, while seeking payday loans. The researchers extracted data from the National Financial capability (NFC) studies conducted earlier in 2012, while leaning on an instrumental approach to variability. The study was guided by the realization that most individuals in the United States seek loans from financing institutions after the release of payment by their employers. The selected instrumental approach served to enable the researchers to address endogeneity possibilities by considering the influences of financial education through the lens of community network effects. After carrying out linear regression-based analysis on the NFC data, Kim and Lee (2018) discovered that individuals that had acquired financial information from high school personal finance courses were less likely to borrow from financing institutions on their payday. Consequently, the researchers concluded that financial literacy was critical to better credit scores. These results are consistent with the findings of a study conducted by Nejad and Javid (2018) in which the researchers investigated the relationship between the objective and financial literacy of consumers to determine whether their levels of financial literacy influenced their financial decisions. The researchers studied the relationship by considering components, such as financial decisions and lending institutions. Nejad and Javid (2018) concluded that less financially literate individuals were more likely to have lower credit scores, due to the inability to make sound financial decisions when faced with the need to engage in retail or lending financial services.

Financial Behaviors and Seeking Advice

Personal financial courses play an irreplaceable role in instilling appropriate financial behaviors that are critical for better credit standings with financial and lending institutions. Moreland (2018) investigated whether finance courses trigger individuals to obtain financial advice and adopt informed finance behaviors. The researcher analyzed data obtained from NFC, which indicated that the propensity to seek financial advice was directly related to financial behaviors. While carrying out the analysis, the researcher-controlled variables related to financial knowledge. Moreland (2018) found out that whereas those with less financial information were more likely to seek financial advice, those with significant knowledge concerning financial matters depicted better financial behaviors and were better placed to implement counsel offered by financial advisors. In a similar study, Stolper and Walter (2017) investigated the correlation between financial advice, financial behavior, and financial literacy. Particularly, the researchers considered the notion that financial education serves as an avenue for enhancing financial literacy and triggering individuals to seek financial advice. After reviewing enormous literature in these areas, Stolper and Walter (2017) concluded that low echelons of financial literacy, which are closely linked to the absence of background financial education, leave individuals economically vulnerable, being unable to determine exact points at which they should seek financial advice.

There exists a strong correlation between the acquisition of financial literacy through personal finance courses and financial behaviors (Lin et al., 2017; Kim et al., 2019). For instance, Lin et al. (2017) undertook a study in which they investigated the place of financial literacy in determining financial advisors in matters related to life insurance. The researchers leaned on a logistic-based regression model to explore the influences of financial literacy, information sources, and financial advisors in relation to life insurance contracts. Findings acquired indicated that individuals that were established in financial literacy were likely to make choices that are more informed after seeking sound insurance and financial advice their ability to make sound financial decisions notwithstanding (Lin et al., 2017). Although financial advisors were found to have enormous influences on the life insurance choices made by clients, Lin et al. (2017) discovered that individuals that depicted excellence in financial matters were less likely to be lured into signing contracts, owing to their ability to consider their financial positions objectively. In a similar study, Kim et al. (2019) investigated the influences of financial knowledge on the fiscal behaviours of U.S. millennials. The researchers studied components, such as advice seeking, financial knowledge, and financial decisions. Kim et al. (2019) discovered that millennials without sufficient financial knowledge were often exposed to low credit scores, lacking objective financial knowledge, and finding financial advice irrelevant.

Designing Personal Finance Courses at the College/University Level

Knowledge on Changing Economic Environments

Personal finance courses in colleges and universities should be tailored to meet specifications pre-determined by the dynamism of current and prospective economic environments if they are to prove relevant and useful in enhancing an individual's credit worthiness (Lusardi, 2019). For example, Lusardi (2019) carried out a study to examine financial literacy and determine the necessity for providing financial education to individuals in the current dispensation. The researchers acknowledged the current practice of equipping high school students with knowledge on money and management of finances. However, they felt that institutions of higher education should focus on providing financial knowledge to college students based on three vital elements. These are (a) numeracy to provide thorough interest rates-related knowledge, (b) knowledge to help understand inflation, and (c) knowledge to help understand financial diversification risks (Lusardi, 2019). Therefore, the researcher investigated current education and economic systems across different countries to suggest a financial education model that suits the dynamism of modern-day economic environments. Lusardi (2019) discovered that appropriate financial education models do not target specific groups based on the prevalent economic conditions. These results are consistent with the findings of a study conducted by Garg and Singh (2018), in which they analyzed current financial education models and financial literacy levels among young people to determine more viable financial education design alternatives based on prevailing socio-economic conditions. The researchers studied literacy levels in relation to demographics like gender, income levels, age, and marital status. Garg and Singh (2018) discovered that different financial education models attend to individuals in these groups differently, as exhibited by diversities in financial knowledge, financial behaviors, and financial attitudes.

The need for the design of college and university finance literacy programs to embody economic environment considerations stems from the ever-changing and often unpredictable economic environments (Alkan et al., 2020). For example, Ergün (2018) investigated the levels of financial literacy as exhibited by college students to determine their suitability considering the troublesome and inconsistent economic environments. Countries considered in the study comprised Estonia, Turkey, Romania, Netherlands, Germany, Russia, Poland, and Italy. Ergün (2018) used online-based survey instruments for data collection that comprised 409 questionnaires before subjecting the acquired data to logistic regression for analysis. The researchers discovered that students exhibited medium echelons of financial literacy, but also pointed out that the responses concerning the effectiveness of current financial literacy curricula varied based on factors, such as student study level, student degree program, parental income levels, and personal levels of financial literacy. Ergün (2018) also found out that most of the students associated the ineffectiveness of finance literacy curricula offered in their universities with their inability to reflect the current states of their national and regional economies. These results are consistent with the findings of a study conducted by Alkan et al. (2020), in which the researchers explored financial literacy levels among Ataturk college students to determine the factors determining financial literacy levels in the university. The researchers studied variables, such as gender, personal income, marital status, and financial knowledge. Alkan et al. (2020) found these variables to determine the responses of the 1,008 respondents concerning the alleged effectiveness of their financial literacy curricula. They also discovered that the curricula failed to offer insightful information in relation to the economic conditions of the country.

Managing Personal Finance

After students leave high school for college, the new institutions should focus on training that pertains to the management of personal finance, since the individuals are on the verge of attaining financial independence (Kuntze et al., 2019). Beck and Garris (2019) carried out case study research reviewing the literature on personal finance courses provided in the United States. The researchers considered the collapse of the U.S. housing market, while discussing the need to shape college finance courses to reflect the ongoing financial crisis. Beck and Garris (2019) found out that it was becoming increasingly necessary for personal finance courses at the college level to generate financial literacy levels that will enable graduates to overcome the financial challenges and handle financial decisions, as required by the dynamic financial landscapes. Particularly, the researchers pointed out that math courses should be entrenched into current finance courses. Beck and Garris (2019) also discovered that although individuals receive finance-related education in high school, they were struggling with credit scores. Attributing the problem to the absence of personal finance management courses at the college level, Beck and Garris (2019) recommended that such perspectives be entrenched into personal finance courses offered in colleges to improve the financial choices made by generation X. In a similar study, Kuntze et al. (2019) investigated approaches that can be used to enhance financial literacy in business colleges through tactical modernization of delivery tools. Particularly, the researchers studied mechanisms that can help advance the management of personal finance among students and issued financial literacy tests to 244 participants. After discovering the inefficiency of conventional teaching models, Kuntze et al. (2019) concluded that personal finance courses, and especially those designed to improve personal finance management, should adopt more innovative, rather than traditional, approaches.

Personal finance courses offered by modern-day institutions should focus on augmenting student personal finance management capabilities, given the pressing influences of materialism notions and gambling habits (Selcuk, 2019). For example, Philippas and Avdoulas (2020) investigated the financial well-being and literacy of Greece students falling under generation-Z to determine the effectiveness of current financial literacy models and possible improvement alternatives. The researchers focused the study on components, such as financial fragility, financial wellbeing, and financial literacy, while simultaneously taking into account the notion of personal finance management. After designing and distributing questionnaires to 456 Greece students, Philippas and Avdoulas (2020) engaged in data analysis using chi-square tests, marginal effect, cross-tabulation, and logistic analysis. The generation-Z was noted as being marked by unique experiences owing to the prevalent financial crisis. Philippas and Avdoulas (2020) found out that most of the respondents were unable to cope with the unexpected waves of financial shock resulting in significant inabilities in personal finance management. The researchers concluded that among other financial literacy policy improvements, education institutions in the region should consider training college students on the management of personal finances. These results are consistent with the findings of a study conducted by Aydin and Selcuk (2019) in which they investigated issues related to money ethics and financial literacy among modern-day college students to determine the attitudes of Turkish college students concerning the effectiveness of the current financial literacy models. Collecting data from 1,443 college respondents from across Turkey, the researchers studied variables, such as financial behavior and financial attitudes. Aydin and Selcuk (2019) found that the undesirable financial attitudes and behaviors of the Turkish college students were closely related to the inability of the campus's financial literacy models to equip them concerning personal management of finances.

Credit Card Literacy.

The rising levels of college and university student indebtedness and poor credit scores should serve as an indicator for institutions of higher education to tailor their financial literacy programs in a manner that reflects focus on the growing concerns (Limbu & Sato, 2019). A study conducted by Hamid and Loke (2021) to investigate the correlation between financial literacy and financial management skills among credit cardholders affirmed the necessity of such measures. The researchers studied the elements of overspending, impulsiveness, and credit card repayment in relation to financial literacy. After analyzing 451 users of credit cards, Hamid and Loke (2021) found that socio-economic factors associated with income, marital status, and education determined the levels of impulsiveness and, as well, influenced repayment decisions for the credit card holders.

Moreover, the researchers discovered that despite being financially literate, most credit card users had consistent issues monitoring financial statements, paying bills promptly, and spending within their financial means. These results are consistent with the findings of a study conducted by Limbu and Sato (2019) in which the researchers investigated the correlation between college students' financial wellbeing and credit card literacy through the lens of self-efficacy. The researchers studied the mediating effects generated by self-efficacy in using credit cards to determine whether personal finance courses offered in college improved students' use of credit cards. After collecting and analyzing data from 427 participants, Limbu and Sato (2019) discovered that although financial literacy helped students in handling their credit cards responsibly, owning multiple credit cards reduced the expected impacts of financial literacy on credit card self-efficacy.

Financial Attitude

Personal finance courses at the college and university levels should be designed to improve students' attitudes towards finances, which is critical for augmenting their financial decisions (Rai et al., 2019). Studies have indicated that students can only engage in effective and thoughtful utilization of their finances when equipped with appropriate money-related attitudes. For instance, Rai et al. (2019) carried out a study in which they investigated the association between financial attitude, financial knowledge, and financial behavior in relation to efficient money utilization to determine the required nature of personal finance courses offered by modern-day institutions. The study involved 394 employed women that had passed through college and were working in Delhi, India. Drawn from private and public organizations, the representative sample was issued with questionnaires designed after the Likert Scale and analysis procedures tailored after the structural modeling approach. Rai et al. (2019) investigated the association between the three variables leaning on path analysis to generate appropriate hypothesis testing mechanisms. The researchers discovered that financial literacy is closely associated with financial attitudes and behaviors determining the soundness of financial decisions engaged by the respondents. These results are consistent with the findings of a study conducted by Lostutter et al. (2019) in which the researchers investigated the correlation between college students' money attitudes and gambling to determine whether college personal finance curricula were equipping students with the appropriate financial attitudes. The researchers studied the elements of financial attitude, college curricula, and rampant gambling tendencies. Lostutter et al. (2019) found out that college financial curricula were not designed to address the attitudes of students towards money, which led to their increased inclination towards gambling behaviors, despite the severity of the consistent negative outcomes.

Colleges are best suited to equip youth with financial attitudes that can take them through the prevailing financial crises (Riitsalu & Murakas, 2019). Recent literature links inappropriate financial attitudes to the absence of subjective financial knowledge among the youth. For instance, Riitsalu and Murakas (2019) investigated the place of subjective financial knowledge in determining the financial attitudes of young people towards the management of personal finances. The researchers constructed fiscal wellbeing scores based on data acquired from financial literacy surveys from Estaonia before testing their hypothesis using the multiple regression analysis approaches. Riitsalu and Murakas (2019) discovered that financial attitudes were closely related to subjective knowledge. They also discovered that appropriate financial attitudes culminated in better financial wellbeing. In a similar study, Saurabh and Nandan (2018) investigated financial risk attitudes in relation to financial behaviors to determine the role of the relationship in financial satisfaction. The researchers studied the components of socialization, financial attitudes, risky financial behaviors, and financial knowledge relating the variables to the nature of personal finance courses offered in college. Saurabh and Nandan (2018) found out that individuals that obtained healthy financial attitudes in college reflected the same in the consistency of financial wellness, which they attributed to less risky financial behaviors and heightened levels of financial satisfaction.

Cultivation of appropriate financial attitudes is essential in helping college students and graduates avoid the notion of materialism that is heightening financial challenges for most modern-day youths (Arofah et al., 2018). Affirming the necessity of including the element of financial attitude in personal finance courses offered in colleges, Arofah et al. (2018) carried out a study to establish the correlation between financial literacy, financial behavior, and materialism. The authors discussed the necessity of embodying appropriate financial attitudes among modern-day youth to counter the materialistic attitudes that were infringing on their financial behaviors. Arofah et al. (2018) surveyed 129 graduates from the field of economic education to determine their levels of financial literacy and materialistic notions. The researchers found out that although the graduates had acquired sound and practical financial literacy from their institutions, they were not adequately prepared to counter the prevailing materialism notion, which often led them to make significant errors in relation to their financial decisions. Although most of the participants acknowledged having relied on financial literacy principles obtained in college when making their financial decisions, they consented to have been greatly influenced by materialism into regrettable financial behaviors. These results are consistent with the findings of a study conducted by Susan and Djajadikerta (2017), in which they investigated financial attitudes, financial behavior, and financial knowledge among Indonesian college students. After studying these components in relation to the student's financial management capabilities, the researchers discovered that although the students had obtained significant financial knowledge while studying in their respective institutions, they often had to choose between the materialism drive and learned appropriate financial behaviors. Susan and Djajadikerta (2017) concluded that college institutions should consider the prevalent materialism concept by embodying it into existing curricula to equip students with the kind of financial attitudes that would help avoid the trap of materialism.

Responsible Decisions

College students are equipped with particular sets of financial knowledge, yet they cannot merge the knowledge pieces into cohesive and useful concepts when faced with the responsibility to make sound and responsible financial decisions (Vieira et al., 2019). In a study examining the phenomenon, Vieira et al. (2019) explored financial literacy models used to instruct college students on financial literacy to determine the most appropriate design for such instructional models. The researchers compared existing models based on their ability to integrate financial knowledge, attitudes, and behaviors leading to financial knowledge mastery. The researchers used a structural equation framework to analyze data collected concerning each of the instruction models subjected to review. Findings acquired indicated that although the models could facilitate knowledge transfer and attitude cultivation, they were limited in generating comprehensive and mastery level knowledge among apprentices (Vieira et al., 2019). Thus, the researchers suggested modifications to ensure that models used for financial education curricula in colleges could help students put together specific knowledge pieces for comprehensive and practical application of financial principles during decision-making. In a similar study, Mudzingiri et al. (2018) investigated financial literacy among university students to determine their risk preferences and confidence levels when utilizing acquired information for daily life decision-making. The researchers studied student financial decisions based on the consistency of financial behaviors in relation to their risk-taking preferences. Mudzingiri et al. (2018) discovered that despite having received training regarding financial decision-making, most of the students were unable to make consistent, responsible decisions leading them to increasing debt levels.

Investment Decisions.

Having acquired financial education background through high school personal finance courses, college and university financial literacy programs should focus on equipping learners with updated and practical information to aid them to make sound investment decisions (Ademola et al., 2019). Whereas, the knowledge acquired through high school financial literacy curricula does not suffice to help students invest wisely, the extra information taught in colleges often causes learners to withdraw from financial investments owing to the influences of risk perception (Ademola et al., 2019; Arianti, 2018). Ademola et al. (2019) carried out a study to investigate risk perceptions among college students in light of the acquired financial knowledge to determine whether college finance courses influence the willingness of students to engage in investment decisions. The researchers identified and selected 378 investors that had attended college and issued questionnaires for data collection. Ademola et al. (2019) discovered that the financial knowledge acquired from college finance courses by the participants played a great role in shaping risk perceptions that often led them to withdraw from potentially profitable investments. The researchers concluded that college finance courses should pay attention to providing a balanced view of investment decisions in relation to financial knowledge to moderate the influences of risk perceptions. These results are consistent with the findings of a study conducted by Arianti (2018) in which the researchers investigated the impacts exerted by financial literacy on investment decisions to determine the appropriateness of modern-day finance literacy curricula. The researchers studied the components of financial behavior, finance literacy curricula, and student financial literacy levels. Arianti (2018) found that financial literacy, though necessary for making financial decisions, had significant negative influences on the willingness of individuals to invest.

Financial literacy offered in colleges has been linked to encouraging individuals and households to invest even with uncertainties in modern-day economic environments (Sadiq et al., 2019). A study conducted by Mouna and Anis (2017) affirmed this assertion as the researchers investigated whether financial literacy was among factors that contributed towards investment decisions and behaviors in Tunisia. Driven by the observed significant changes in the country's economic environment, the researchers attempted to establish a correlation between the engagements of citizens in financial market investments and the levels of financial literacy. Mouna and Anis (2017) developed questionnaires to assess demographic variables, financial behaviors, and financial literacy among individuals and households. The researchers discovered that most of the individuals and households that engaged in financial market investments had acquired college-level education on finances, whereas households and individuals without such knowledge seldom considered investing. Mouna and Anis (2017) concluded that college education on financial matters is critical to encouraging individuals and households to make investments in the financial market. These results are consistent with the findings of a study conducted by Sadiq et al. (2019) in which they investigated the moderating role played by financial literacy in the presence of personality traits that cause individuals to consider financial investments as being risky. The researchers studied variables, such as investment choices, personality traits, risky investments, and risk aversion. Sadiq et al. (2019) discovered that although individuals refrained from making financial investments in fear of losing, financial literacy played a critical moderating role in balancing emotions and personality traits leading to investment decisions.

Planned Behavior

College and university finance literacy programs remain significantly inefficient unless curricula modifications focused on training learners on the component of planned behavior, as it relates to investment decisions (Akhtar & Das, 2019; Raut, 2020). Proving the worthiness of this statement, Akhtar and Das (2019) investigated investment intentions among prospective Indian stock market investors to determine the nature of their investment decisions. The researchers leaned on the planned behavior model considering variables, such as financial self-efficacy, personal traits, and financial knowledge. Using cross-sectional and quantitative approaches, deployed questionnaires to collect information and acquired 920 operational responses. Findings from the study revealed that planned behaviors among the prospective investors were partially influenced by financial attitude, which moderated the influences of personality traits allowing knowledge to determine the nature of investment intentions. Akhtar and Das (2019) concluded that financial literacy was expedient to neutralize the negative impacts of personality traits on planned investment intentions. These results are consistent with the findings of a study conducted by Raut (2020), in which the researcher investigated the influences of past behavior and financial literacy on planned investment decisions by potential investors. The researchers studied planned behaviors in relation to investment decisions based on the influences exerted by financial literacy. Raut (2020) found that in cases of limited financial knowledge, investors were limited regarding their ability to plan their future investment behaviors.

The realization that financial literacy encompasses behavioral perspectives should lead colleges and universities to establish financial education curricula on the need to equip learners with useful financial planning behaviors (Aydemir & Aren, 2017; Potrich et al., 2018). In a study conducted by Potrich et al. (2018), the researchers sought to demystify financial literacy from a behavioral point of view by exploring its integrative influence in determining financial behaviors in light of components, such as indebtedness propensities, materialism, and compulsive buying. The researchers recruited 2,487 Brazilian participants for data collection and leaned on structural equations, and confirmatory factorial approaches for analysis. Potrich et al. (2018) discovered that although financial literacy played a chief role in determining planned behavior capabilities among respondents, exhibiting planned financial behaviors proved challenging owing to the impacts of materialism and compulsive purchases. In a similar study, Aydemir and Aren (2017) had obtained analogous results upon investigating the influences of individual factors in relation to financial planning when individuals are faced with risky investment choices. The researchers studied the individual factors and risky investments applying financial literacy as a chief determinant. Aydemir and Aren (2017) discovered that the possibilities of financial planning though facilitated by financial literacy were hindered by the moderating influences of individual factors, such as emotional intelligence.

Need for Personal Finance Courses in High School and College

Recall and Reinforcement

The courses offered in high school, though expedient, may not be as useful to students after college graduation without additional financial training in college for enhancing recall and reinforcing appropriate financial behaviors (McKillip et al., 2018). Aboagye and Jung (2018) carried out a study in which they explored the components of debt, financial satisfaction, and financial behavior. The findings of the study were diverse and correlated to the need for reinforcement of financial information. For instance, Aboagye and Jung (2018) discovered that although overspending was common among individuals that had gone through financial education curricula, the tendencies of savings and reasonable spending were augmented in cases where individuals were able to acquire constant reminders of the associated financial principles. More importantly, Aboagye and Jung (2018) found out that constantly reminding individuals concerning financial literacy principles improved their risk tolerance, financial attitude, and augmented their financial satisfaction levels. The researchers concluded that education systems should generate complementary and continuous financial literacy programs that focus on enlightening apprentices on financial principles and that constantly remind of the necessity to make a life-practice out of acquired financial information. These results are consistent with the findings of a study conducted by McKillip et al. (2018) in which the researchers investigated personal finance curriculum at the college level to determine the need to base finance courses on the financial needs, interests, and circumstances of resident students. The researchers studied deficits in financial knowledge exhibited by resident student populations drawing from the evidence of knowledge taught in high school. McKillip et al. (2018) discovered that most of the students were unable to recall the financial knowledge they had acquired before graduating from high school and concluded that college financial courses should be consistent with the need to reinforce and enhance recall for college students.

Financing/Borrowing Decisions

Without consistent instructions on making borrowing decisions, students are likely to join their already trapped counterparts in declined credit worthiness after college (Fan & Chatterjee, 2019). Stoddard and Urban (2020) researched the influences generated by State-mandated education on finances on the finance acquisition or borrowing behaviors of college students. The researchers noted that although financial courses offed in high schools were essential to augmenting financial literacy, they could not suffice to help college students make sound financing decisions owing to financial experience limitations. Thus, Stoddard and Urban (2020) investigated the possibilities of using a policy lever that is based on high school finance graduation requisites to help students shift into better borrowing decisions as they merge the high school with college finance management knowledge. The researchers also discovered that although financial education offered in colleges plays a critical role in improving prospective student scores, without the input of personal finance courses offered in college it remained challenging to shift the students from high- to low-cost financing decisions. In a similar study, Fan and Chatterjee (2019) investigated the components of financial socialization, student loan debt, and financial education in relation to the borrowing decisions made by college students and college graduates. Particularly, the researchers studied the contribution of high school personal finance courses towards the acquisition of comprehensive financial literacy. Fan and Chatterjee (2019) discovered that college students were unable to grasp the depths and heights of financial information offered at the college level in the absence of a thorough understanding of financial principles taught at the high school level.

Financial Wellness and Credit Scores

Consistent reminders and instructions concerning financial principles are the best hope that high schools and colleges produce citizens whose financial behaviors and attitudes lead to financial wellness (Silva et al., 2017). A study by Montalto et al. (2019) indicated that the multi-dimensional nature of financial wellness could not be guaranteed by the personal finance courses offered in high school. The researchers reviewed existing literature concerning aspects underpinning the financial wellness of college students considering components like financial stress, student loans, credit card use, financial-self-wellness, and financial literacy. The study was directed by the notion that financial wellness being a multidimensional component should be repeatedly inculcated in students both at the college and high school levels to facilitate recall and comprehensive understanding of fiscal principles. Thus, while reviewing the literature on the nature of financial education offered in colleges, Montalto et al. (2019) also considered the contributions of high school-based education in the ongoing development of financial literacy among students. Montalto et al. (2019) discovered that college education on financial matters was critical to build on information already acquired from high school and facilitate financial capability improvements, which are essential for the attainment of higher credit scores. Thus, the researchers concluded that both high school and college-level financial education curricula were critical for students to achieve financial wellness and credit scores during and after college graduation. These results are consistent with the findings of a study conducted by Silva et al. (2017) in which they investigated the correlation between financial education and financial wellness to determine the necessary echelons of financial literacy required for the attainment of fiscal soundness. The researchers used a descriptive paradigm based on the quantitative nature of the issue drawing data from 4,698 students to study components, such as spending patterns, financial knowledge, socialization, and progressive financial knowledge. Silva et al. (2017) discovered that although the financial knowledge acquired in high school was essential, it only served as a building block for the preceding and more comprehensive nature of financial knowledge transmitted in college.

Countering Negative Financial Socialization

Financial socialization, which is acquired outside of learning institutions through peer influence and family influence often contradicts the nature of financial information acquired in high school making personal finance courses in colleges and universities critical to ensure that young people adopt and retain the necessary financial behaviors and attitudes (Pandey et al., 2020; Thomas & Subhashree, 2020). Pandey et al. (2020) affirmed the necessity of availing personal finance courses at both high school and college levels by investigating the influences of financial socialization on financial literacy acquired from education institutions and the consequent impacts on their attitude towards finances. The researchers leaned on existing literature to design a framework upon which they explored the phenomenon. Selecting 446 young adults with a mean age of 22 years, Pandey et al. (2020) investigated the possible dilution influences of financial socialization generating a discussion based on the identified impacts of family socialization on school-based financial literacy. The researchers discovered that financial socialization from the family point of view caused young people to adopt financial attitudes that were contrary to those acquired from school. These results are consistent with the findings of a study conducted by Thomas and Subhashree (2020) in which the researchers explored factors determining financial literacy among students taking engineering courses. The researchers studied components, such as financial confidence, financial attitude, financial knowledge, peer-group influence, and family influence to determine the extent to which financial socialization outside of school environs altered students' perceptions concerning financial principles. Thomas and Subhashree (2020) discovered that colleges should indulge in long-term, as well as deliberate attempts to counter the negative impacts of financial socialization on the financial principles acquired during personal finance courses.

The extensive impacts of financial socialization on student financial literacy require consistent and well-planned efforts if high schools and colleges are to generate graduates whose financial attitudes and behaviors reflect the fundamental principles of financial education curricula (Setiyani & Solichatun, 2019). In a study meant to investigate gender disparities within the context of financial behavior and literacy, Sharif et al. (2020) explored the role played by parents in the financial literacy of their children. The researchers engaged a cross-sectional survey approach in which they selected 572 adults from different Malaysian campuses. The study's findings revealed that children from both genders learned extensively from their parents in matters concerning financial behaviors. Particularly, Sharif et al. (2020) discovered that female children were more attentive to their parents' financial behaviors and attitudes, as opposed to males. These results are consistent with the findings of a study conducted by Setiyani and Solichatun (2019), in which the researchers investigated college students' financial wellbeing from the perspective of financial socialization and the resulting financial behaviors. The researchers compared the acquisition of financial literacy from college institutions against the students' responses and behavioral alignments to financial information acquired at the family level. Setiyani and Solichatun (2019) discovered that although students held on to the financial information they acquired from personal finance courses, their financial confidence levels were greatly determined by parental and peer influence.

Summary and Conclusion

Literature has indicated that personal finance courses offered at the high school level influence the prospective credit scores of graduate students. The dearth of literature concerning the place of similar courses at the college level has left gaps in understanding the retention, memory, and recall of students. Nonetheless, the history of credit reporting of FICO scores is paramount to gaining comprehensive insight into the contributions of personal finance courses towards better credit scores. This is because lenders have historically relied on credit scores to determine the reliability of individuals and the possibilities of repayment upon contractual issues of financial loans (Kaufman, 2018). The necessity of personal finance courses in high school is further upheld by the fact that the number of people in need of credit has been increasing exponentially, owing to escalations in financial problems across the globe. On the other hand, literature has made it clear that FICO scores are of much more worth than credit scores in determining creditworthiness (Cannon & Hurd, 2020). Thus, personal finance courses at the high school level must be tailored in such a way as to facilitate better retention and recall of financial information.

Several factors have been identified as contributing to or determining the capability of students to retain financial information acquired through personal finance courses in high school. For instance, visual aids and instructional videos can prove expedient in enhancing student recall in cases where instructors appear in the videos instead of relying solely on the traditional chalk and talk instructional methods (Ho & Intai, 2018; Schneider et al., 2020; Vanichvasin, 2021; Wang and Antonenko, 2017). Additionally, the nature of feedback determines students' recall capabilities as illustrated in current literature that critical feedback is more useful in enhancing student memory, as opposed to confirmatory feedback (Cutumisu & Schwartz, 2018; Iwaki et al., 2017). Even though retention of information acquired during high school finance education curricula is essential to augmenting prospective credit scores, it is important to note that the finance courses at the high school level generate specific impacts.

When delivered appropriately, high school finance courses should culminate in the improvement of financial decisions, which greatly determines an individual's future credit and FICO scores. The improvements in financial decision-making become observable during later stages in life through inclinations to seeking financial advice, better investment decisions, appropriate financial behaviors, and financial attitudes (Deenanath et al., 2019; Johnson et al., 2021; Lusardi, 2019; Urban et al., 2018). Such improvements implied the existence of a strong correlation between personal finance courses and credit scores. Current literature has established the relationship based on behaviors exhibited by individuals when engaging financial alternative services, approach payday loans, and seek advice before making and implementing financial decisions (Kim & Lee, 2018; Pak, 2018; Stolper & Walter, 2017). However, these improvements can best be achieved through continuity, which calls for long-term and tactical engagement of students in personal finance courses at the high school level.

In the designing of personal finance literacy, college and university curricula should adopt approaches that consider critical factors. For instance, institutions of higher education should seek to impart knowledge concerning changing economic environments (Garg & Singh, 2018; Lusardi, 2019), instruction on appropriate financial attitudes, making responsible investment decisions (Ademola et al., 2019; Rai et al., 2019), and management of personal finance (Beck & Garris, 2019), which is inclusive of credit card literacy (Limbu & Sato, 2019; Hamid & Loke, 2021). Notably, the prevalence of materialism notions and compulsive spending requires colleges and universities to found their financial literacy curricula on courses that teach about planned behaviors (Akhtar & Das, 2019; Raut, 2020) and to help neutralize the influences of personality traits and financial socialization (Aydemir &

Aren, 2017). The need to help students acquire, retain, and practice financial knowledge that can help improve their credit scores necessitates that colleges and universities take up the responsibility to continue the financial literacy agenda. According to Aboagye and Jung (2018) and McKillip et al. (2018), unless financial literacy is offered at both high school and college levels, it may not be possible to reinforce financial knowledge and recall of financial principles. Additionally, the absence of financial limitations among students makes them prone to ‘bad’ borrowing decisions (Stoddard & Urban, 2020), which Pandey et al. (2020) believed emanated from the contradicting financial socialization consistently acquired from family and peer groups. Therefore, the best way to enhance financial wellness and credit scores among students is to ensure continuity of financial literacy from high school to college.

Chapter Three: Methodology

This chapter introduces the research methodology for this study regarding the correlation of personal finance class and credit scores. This research allowed for a deeper understanding of how individuals perceive money utilization and how it impacts credit scores and addressed retention of knowledge from the personal finance course influencing everyday decisions. The research study, the methodology, the recruitment of participants, analytical data, and moral concerns are addressed in this chapter.

Research Questions

Due to low financial literacy among high school students within the United States, personal finance courses aided students' financial knowledge. However, quantifying this increase in financial literacy has not been accomplished. This study focuses on the relationship between financial literacy and the successful completion of a high school personal finance curriculum. The study proposed to build a theory to answer the following research questions:

RQ1: What students retained financial information after taking a personal finance course and why?

RQ2: Which areas in the personal finance course do high school students need to have addressed at the college/university level?

RQ3: Should personal finance courses be taught at the high school level? The collegiate level? Or both?

Problem and Purpose

This study was chosen to examine the curriculum's retention rates within students in high school personal finance courses required by the State of Missouri and how these retention rates impact financial literacy and higher credit score ratings after course completion. After successful course completion, data collected from surveys and interviews were studied to understand the correlation between course success, increased competency in money management, and other financial matters. This research addressed a persistent gap of knowledge with the literature concerning the retention of information gained during high school finance courses and its contribution to economic efficacy after completion, as students enter adulthood.

A qualitative study was chosen to clarify and explain relationships found to exist between variables. It allows researchers to explore relationships between variables in-depth and confirm or cross-validate associations discovered between variables. Qualitative and quantitative methods are compared to see if they converge on a single interpretation of a phenomenon (Brannen, 2017, p. 3).

Vaske (2019) stated that when a researcher wants to know about individual attitudes, trends, or opinions of a population by studying a population sample, a survey design is utilized. Hence qualitative is the design used. Halcomb (2018) stated there are three differences between quantitative and qualitative research: (a) the distinction between explanation and understanding the purpose of inquiry; (b) the credit between a personal and impersonal role for the researcher; and (c) a distinction between knowledge and knowledge constructed (p. 39). A qualitative researcher would use experimental or survey design procedures in the research. Qualitative research relies on the researcher's data from data collection methods, such as primary observation, conducting of interviews, carrying out questionnaires, and focus group research. Participant observation and taking recordings in their natural settings, documentation, and artifacts study were also other powerful data collection tools. Interviews were conducted in this study after subjects completed the survey.

In quantitative research, once data are collected, the data are transformed from words to numbers, allowing the researcher to use statistics to analyze research questions. The quantitative analysis provides a summary of data and includes measures of averages and variability. Graphs, scatter plots, and frequency tables are used to visualize data and check for any trends or outliers. In quantitative research, a researcher can make predictions based on data—a test of an hypothesis or sample data to estimate population parameters.

The Researcher

The researcher worked in education for over 32 years and held a Bachelor of Science in Speech Pathology, a Master of Arts in Learning Disability, a Master of Arts in Educational Administration, and a Specialist in Education Administration. No participant had direct contact or relationship with the researcher that represented a conflict of interest, such as a chain of command, contract, or any current relationship with the investigator that may have communicated bias on the present research study.

The researcher had been trained and completed the designed research requirements. As a former high school principal, the researcher interviewed and hired many individuals. The researcher has been trained in the interview process and enhanced listening, asking appropriate questions, and follow-up questioning for clarification. The courses in research investigation were taken at Truman State University and Lindenwood University.

Study Participants

The sample participants were derived from a population of high school teachers who taught personal finance, family and consumer science, and microeconomics courses in Missouri. Participants were also students who graduated from a Missouri high school from 2015 to the present. Missouri was divided into seven regions: Northwest, Northeast, West Central, Mid-Missouri, East Central, Southwest, and Southeast. The regions and districts represented in the study were of different sizes and included suburban, urban, rural, private, and public schools. Each targeted county in each region was assigned a number. The number of counties was entered into the Random Generator Instrument to decide which county would be surveyed in the different areas. The 46 school districts in the targeted counties were contacted by sending the surveys through *Qualtrics* to the superintendents, or person in charge in each school district, to allow teachers and students to participate in the surveys and interviews. Reminders were sent at one-week and two-week intervals, and each email address was given 20 days to respond before another reminder was sent. After another 20 days elapsed for the superintendents, the surveys and interview questions were sent to Assistant Superintendents, Curriculum Coordinators, and Coordinators over the finance department, and reminders were sent at one-week and two-weeks intervals and 20 days to respond.

The researcher sent a permission form to the superintendents, assistant superintendents, curriculum coordinators, and coordinators over the finance department, which as shown in Appendices A and B was required for each participant before participating. The researcher anticipated 5 to 10 teachers and 15 to 30 students, as determined by the capacity.

The consent form submission and the rules of engagement were sent to the participants in the same email, stating what the respondent can and cannot do during the study. First, the researcher stressed the need to complete the questionnaire once availed. We claimed that if a part of the questionnaire is not answered, the study's conclusion would have a higher inconsistency probability. Therefore, once listed, the participant agreed to complete the study and not just part of it. However, they were also informed that if one was not comfortable completing the study, they could withdraw at any time—this gave the respondents the freedom to withdraw from the study regardless of their reason without any implications. Finally, one had to answer the questionnaire based on previous experiences. An exclusion and an inclusion criterion that ensured the study recruited the right people to increase accuracy and reliability.

Inclusion and Exclusion Criteria

For one to be included in the study, they had to have submitted a signed consent form. In addition to a consent form, the study also insisted on students who attended school the traditional way. This implies that only those who attend classes physically could take part in the study. Further, for those who were out of school, they must have attended a physical class. These inclusion criteria aimed to ensure only those who experienced other school environments while being taught the personal finance class could participate. In other words, these criteria excluded online students. While attending school the traditional way, one experiences various environmental forces that enable them to practice what they learn. The researcher argues that an online student will not understand the financial pressure a student who attends the traditional classes model undergoes. According to this study, a student who attends school the traditional way has a higher probability of practicing personal finance and money management more than those who attend online classes. For instance, a student who has to take a bus to school every day on a tight budget will understand the need to practice money-saving best practices. On the other hand, one who attends online classes only focuses on studying rather than any other environmental factors that may influence their fiancés. In addition, a student who attends classes the traditional way also manages their food program. They understand the basics of priority. They will not waste the little money they have, but save to survive the next day. Based on these reasons, the study concluded that online students' inclusion would lead to biased results.

The study also included only teachers who had attended the traditional class model and were also teaching students the traditional way. Like students, teachers who attended classes the traditional way understood personal finance better, due to the urgency of practice. During their studies, teachers who attended classes the traditional way understood that they had to manage the money to purchase the necessary items and bus fare. Hence, their inclusion in the study could improve the reliability and accuracy of the results. On the other hand, those teachers who attended online classes were excluded, since they were not exposed to the environmental factors that prompted money management. Further, the teachers who participated were those who also taught students the traditional way where students attended classes in person. Logically, teachers who teach in traditional classes observe the behavior of students, as far as their finances are concerned. From such first-hand information, the teacher would understand if the student put the money-saving skills into practice. On the other hand, the physical interaction is reduced to almost none between an online student and the teacher. A tutor teaching online would know very little the degree of application of money management skills taught in class by students. Therefore, this study considers their inclusion an avenue of biasness.

The study included students within the first five years of graduation and teachers who studied personal finance. Only those who studied personal finance will understand the topics and their influence in their later life. Those who did not study personal finance have no idea how theories taught in those classes can be put into practice to achieve financial freedom. For instance, the researcher argued that a student who has never been taught personal finance would not have an idea how personal finance could impact their current lifestyle and the future. For this, only those with knowledge about money management were included. The student should also be between one and five years of graduation. This ensures increased accuracy and reliability of the information provided, as the time since graduation is considered current. In addition, a teacher will only educate children based on what has worked for them—this is the reason why this study focused on teachers who have a history of attending personal finance classes.

Data Collection

The study used surveys and interviews, found in Appendix A-Student Survey; Appendix B -Teacher Survey; Questions-Appendix C-Student Interview, and Appendix D -Teacher Interview Questions. *Qualtrics* were used to document the surveys and interviews were scheduled to be conducted by telephone only. The interviews were completed by requesting a verbal informed consent, detailed in the study with the participants. If data emerged during the research process, interview questions might be added, or the proposed interview questions will be modified in the research study (Rutberg & Bouikidis, 2018; Speer et al., 2020; Weller et al., 2018).

Consent from the Institutional Review Board (IRB) was acquired from the Lindenwood University in St. Charles, MO. Once approval was given, the researcher utilized *Qualtrics* to contact the school districts' superintendents in the targeted population, by email. The researcher requested assistance and permission to send emails to potential participants in Appendices A, B, C, and D. Interviews were to be conducted once participants gave their approval through the survey.

Research Survey Questions Rationale

The study's main aim is to determine the correlation between personal finance class and credit card score. The major objective is to determine the relationship between personal finance class and a respondent's money management skills. As indicated earlier in this study, 69% of students who graduate from high school to colleges and universities end up accruing huge sums of student loans. Other students also fall victim to circumstances, as their guardians or parents use their credit cards badly, even before they are old enough to use the card. One is immersed into debts, even before they are old enough to understand what debts are. This section of the study reviews the research survey questions and the rationale behind inclusion to achieve the objective of the study. The study's questionnaire had 20 questions that both the teachers and the students responded to. Each question was formulated to help realize the objective of the study. The study also used a 5-point Likert scale to measure the intensity of a participant's response to various questions, with 1 being the most agreeable and 5 not quite.

1. Should a personal finance course be taught over a single semester?

This question is aimed at finding out if a personal finance course should be taught in a single semester. The rationale was to determine whether or not the participants agree that teaching a personal finance course within a semester is good enough to pilot a participant's money management skills throughout their lives.

2. Should a personal finance course be taught over an entire year?

This question is aimed at evaluating the difference in grasping content when the course is taught over a year rather than a semester—the researcher aimed at creating a balance between the teachers' and the students' responses to the question. Based on logic, the researcher understands that a student likes shorter courses, since they are easy to complete; hence they could go for the single-semester response.

However, the teachers would understand that grasping an important concept like personal finance cannot be rushed, thus the need to study widely for effective application of the studied concepts. This question was created to determine the level of importance of the course to those who value personal finance and studies regarding the course.

3. Content mastery of personal finance is greater when taught over one semester?

This question aimed at establishing the interest of the participants in understanding the content of the course. The researcher also expected a difference between the two study sample groups. I expected that the teachers would disagree with this concept as students. I also expected that this question's response would correlate with those who stated that the course could be taught within a single semester.

4. Content mastery of personal finance is greater when taught over a year?

The question was adopted to check consistency and correlation with the response to the second question. The question aimed at determining if the respondents agree that personal finance content mastery is effective when one is taught over the year. On the other hand, it also aimed to determine the correlation between the teachers' and students' responses.

5. Do the grades obtained in personal finance courses in high school impact financial literacy?

This question evaluated the correlation between the personal finance course in high school and its impact on financial literacy. As mentioned earlier in the exclusion and inclusion criteria, for one to participate in this study, they must have attended a personal finance class the traditional way. Participating in answering this question without having attended the class would lead to biasness. From the responses, we will determine the impact of the course at the high school level on enhanced money management skills later in life.

6. Should personal finance be taught at the high school level?

This question is consistent with the inclusion and exclusion criteria formulated to guide the study's respondent recruitment that stated that one had to have attended a personal finance class in high school prior to inclusion. If a respondent never attended a personal finance class, they risk providing inconsistent responses, which would introduce inaccuracies in findings. The question aimed at establishing the agreeability of the participants towards teaching the course at the high school level.

7. Personal finance course would be more relevant when taught at the collegiate level?

The question is consistent with the research question evaluating the correlation between personal finance class and credit card score. The question aims to evaluate the respondents' agreeability in terms of what level of study the content gained from the course would be more practical and applicable. The responses would define the speculation that a personal finance course taught at the high school level correlates with financial literacy later in life.

8. Should there be a personal finance exam upon completion of high school?

This question aims to evaluate the importance of an exam at the end of the course to determine the student's level of mastery. The question determines the reliability of the responses in answering the research question.

9. Should there be a personal finance exam upon completion of the collegiate level?

The question examines the importance of an exam at the end of the course when offered in college. Further, the rationale is to determine if personal finance mastery at the collegiate level correlates with collegiate education more than high school.

10. Theme 1: Goals and decisions provided me key information that helped me after graduating high school?

This question aimed to determine the major impacts that goals and decisions had on a participant's life after graduation. This helped the researcher determine the effectiveness of personal finance mastery in finance management decisions.

11. Theme 2: Careers and planning provided me key information that helped me after graduating from high school?

The question is aimed at collecting information about the impact of careers and planning as topics under personal finance on finance literacy after graduation. This would inform the conclusion of the study on the best personal finance topics influencing a student's money management skills after graduation.

12. Theme 3: Budgeting provided me key information that helped me after graduating from high school?

The question aims at establishing the impact of budgeting as a topic under personal finance on a person's financial literacy. The question establishes the importance of budgeting in understanding a participant's personal finances and skills.

13. Theme 4: Banking finances provided me key information that helped me after graduating from high school?

This question aimed at evaluating the impact that the banking finance topic taught under the personal finance course had on the individual after graduation. The responses from this question will be used to determine the level of impact this topic had on a graduate's financial literacy compared to the rest of the topics.

14. Theme 5: Saving and investing provided me key information that helped me after graduating from high school?

This question also determined the impact that saving and investing topics had on a graduate's financial literacy. It determines the level of application of the content of the topic in relation to the rest. The responses to this question will be used to determine the impact of the topic on a participant's asset management skills.

15. Theme 6: Credit provided key information that helped me after graduating from high school?

This research survey question collected data on the impact that credit, a personal finance course topic, had on a participant's financial literacy. The responses determine the level of importance of the topic in relation to financial management skills.

16. Theme 7: Computer skills provide me key information that helped me after graduating from high school?

Computer skills being among the listed personal finance course topics, the study evaluates its impact on a participant's financial literacy after graduation. This determines the level of importance of the skill in a person's finance skills levels.

17. The information on income provided me key information that helped me after graduation from high school?

This question collects information on the influence of the topic, income, on the personal finance of the participant after graduation. This will also show the positioning of the topic in relation to the other topics in influencing the person's financial literacy.

18. The information on money management provided me key information that helped me after graduation from high school.

The question collects information about the importance of the money management topic on a participant's financial literacy. The response also doubles as a measure of the level of importance of the topic in relation to the others.

19. The information on spending and credit provided me key information that helped me after graduation from high school?

This question intends to collect responses on the impact of spending and credit on the respondents' financial literacy. This is also consistent with the study's inclusion and exclusion criteria stating that only those who attended a personal finance class could participate, eliminating chances of irregularity.

20. The information on saving and investing provided me key information that helped me after graduation from high school?

This was the final question that both teacher and students responded to. The question aimed at establishing the correlation between skills learned through studying saving and investing topics and the level of financial literacy of the participant. This combination of factors could independently influence financial literacy, but combined to check if both can influence financial literacy to a certain degree.

Trustworthiness

Qualtrics was used for the surveys and interview questions (Appendix A-Student Survey; Appendix B -Teacher Survey; Student Interview Questions-Appendix C, and Appendix D -Teacher Interview Questions). *Qualtrics* were used to document the surveys, and interviews were scheduled to be conducted by telephone only. The interviews were completed by requesting an informed consent reported in the surveys with the participants. The Lindenwood Institutional Review Board and CITI outline biomedical human subjects research training, an explanation of procedures, social/behavioral human subjects research training, description of risks reasonably to be expected, a description of benefits reasonably to be expected, an inquiry regarding the procedures, good clinical practice, conflict of interest and instruction that individuals are free to withdraw from the research at any time. The Lindenwood University researcher was enshrined to undertake training concerning the handling of human subjects in research before any undertaking of human subjects constituting research. This guaranteed that all participants were protected and that the research is protected and not recognizable.

Ethical Concerns

Ethics was a top priority throughout the study by the researcher. The researcher followed the methods outlined by Lindenwood University and by the Institutional Review Board. Following the ethics policy was essential to ensure the reliability and validity of the research study. The risk to the adults and former students was minimal and qualified them to participate in the study. The adults and former students were over 18 years of age and independently responded to the *Qualtrics* survey (Callahan, 2019). Grownups are the best people to deal with since they have the autonomy to make decisions by themselves. It is not ethical to use underage people or people who are not mentally sound in research as the researcher might take advantage of them (Callahan, 2019). Any participant in the study must decide things freely by themselves. This helps to maintain the liberties that a person enjoys even during researcher. It also helps in maintaining the respect that the participant deserves.

To effectively address ethical considerations in the research, this paper expanded the following points:

i. It is imperative to have voluntary participation in research. The participants maintain the right to withdraw from the study at their discretion.

ii. The respondents must make informed consent when responding. This means that the researcher should tell the participants everything and allow them to make their decisions freely. This principle enables the participants to understand the research before making their decisions (Ethical theories, n.d.). Researchers must give sufficient information to the participants willingly without any form of malpractices, manipulation, or coercion.

iii. The researcher must ensure the avoidance of discriminatory, unacceptable, offensive language.

iv. The anonymity and privacy of the respondents are imperative to the research.

v. Give credence to the work done by other scholars with proper referencing.

vi. Maintain objectivity throughout the discussions and analyses of a paper.

vii. Adhere to the Data Protection Act stipulated by the constitution.

viii. Follow all the legal principles in a country while conducting research (Ethical considerations, 2019).

ix. Ethical issues are more dependent on iv) and v) in studies that use secondary data collection.

The ethical practice code is limited to specific universities and deciding the one to follow according to a researcher is critical. There is an excellent impact on the choices of actions and words through the ethical approaches in decision-making. Any step taken through ethical thinking may result in several possibilities. One may be having the correct motivation and doing the right actions in the researcher setting. This is the requirement and goal of every researcher. It is possible to have a valid cause but also do the wrong activities. Regardless of the researcher setting's positive wishes and intentions, the wrong actions will undoubtedly result in adverse outcomes. Having the wrong motivation and doing an incorrect action will not yield full results

(Ethical theories, n.d.). For example, getting late to work is a negative aspect for a researcher. Essentially, this will; not yield enough success for the research. The worst problem is having incorrect motivation and doing the wrong thing in a researcher's process. This attitude and action limit the quality of research. Researchers should ensure that this situation is avoided if they are to succeed in their work. Exposing true motivation is difficult. Such satiation limits ethical assessment to evaluation of a work's outcome and the actions to achieve it.

All ethical decisions depend on the context. For example, words may be used in the manipulation of events. Promotions may be in use to manipulate performances. Hence, words and actions are not the only gauging items of ethics. Moral principles should confine an individual to the correct decisions. The outcomes of any words and deeds in a group situation will determine the ethical decision’s success. It is possible to evaluate ethical decisions by any researcher by determining the researcher's success. Moral behavior evaluation is consequential (Callahan, 2019). The outcomes have several possibilities, as discussed above. Proper motivation is hard to expose, and assessment of the effect should emphasize the situation.

It is always a good decision for researchers to seek long-term moral solutions because one has to seek what is right. Doing the right thing always involves having a strong will and being intolerant to dishonesty. Researchers who are morally upright usually have personal convictions to remain faithful to the particular course of actions. Essentially, this researcher cannot be swayed into doing otherwise at all costs (Pozgar, 2019). In terms of a business context, the ethical decisions and steps by the researchers reflect the course of actions. Having solid personal morals sometimes conflict with an organization's ethics. For example, situations where a researcher has to sack an individual are hard to handle, as in a utilitarian practice. In this case, the moral grounds must be upheld at all costs as the researcher has a conviction. Organizations do not mind much about what a person feels or believes in, but rather what they can do for them. Such an approach may bring a situation of a conflict of interest to the organization's management. To incorporate ethics into the decision-making process is a matter of deciding what to do and how to do it. Placing priorities first is key to attaining the required success while also remaining true to the ethical considerations.

Several ethical concerns were addressed in this research. Conflicts of interest occurred when the obligation, investigation, or project conflicted with personal interests. Conflict of interest concern was found when there was research conducted in a study. The individual(s) showing the investigation was interested in the research outcome, be it (financial or family-related, or a profit was made). Conflict of interest guidelines indicated that individuals had to disclose if family members had a financial interest or investment in the research (Ethical theories, n.d.). If any dispute was noted in the study, a written notice should be processed to eliminate the conflict, as well as the NIH office must be notified that the conflict has been managed. In case of a conflict of interest, there were several recommendations to consider: to disclose publicly any financial interest, hire an independent reviewer, severe the relationship with the company, obligation to patients should be regarded above all in the research, as well as, how to handle the data (Callahan, 2019). Data management detailed three issues: (a) collecting ethical and reliable data; (b) the possession and management of collected data; and (c) the collection of documenting and giving access to the data with researchers and peers.

There are many sectors to consider when a recruitment process is being conducted, and ethical issues are some of them. The selection procedures and their effects on the participants' psychological well-being should always be considered. Sometimes, the selection procedures that are deemed fair might significantly affect participants' self-esteem. The other ethical issue is sharing and protecting this information upon establishing the findings (Ethical considerations, 2019). This information deserves to be transferred to ensure that all individuals have been reached with the information while. Additionally, the information should be shared safely to ensure that any malpractices are not done. Such information is susceptible and can tarnish the reputation of the participants.

There exist strong beliefs that the participants of research make choices upon a complete understanding of the purpose of the study. Teaching these people, the risks of taking part in the study is also critical to ensuring they are free and independent in their decisions. Research advances that students need financial literacy for them to make informed decisions. However, it is usually vital to voluntarily join the study (Pozgar, 2019). These are the necessary precautions that research should take regarding planning, implementation, and follow-up in studies. These precautions will protect the participants' rights. The establishment of ethical guidelines protects the volunteers while guaranteeing the integrity of the process.

The design of all studies allows them to answer specific questions. The answer must be essential for it to justify the acceptance of risks by people. This also means that the research questions must ensure the scientific understanding of the concepts by giving the participants the necessary information. Therefore, it is essential to design the research question correctly. A well-designed study follows scientific validity. This study was designed to foster the understanding of the participants in the critical research, the researcher must ensure the question is answerable before asking it to the participants (Ethical considerations, 2019). The feasibility and validity of the research methods are also essential. The study design followed acceptable principles to ensure reliable practices and precise procedures. It is unethical to conduct invalid research, since it will waste resources and not answer the questions.

A fair selection of subjects was necessary when designing this research. The question is reasonable and enabled the research to meet its specific study goals. This also ensured the elimination of vulnerabilities, privileges, and all other forms of unrelated factors. The participants who give consent to participate in research must enjoy any potential benefits from the project. The study ensured that a good rapport remains between the researcher and the participants to guarantee them the chance to take place in future research opportunities. There should be a specific and scientific explanation for any excluded person from research and a description of any risk susceptibility. A favorable ratio between risks and benefits was essential to the study (Pozgar, 2019). There are uncertainties of the degree of benefits and risks in every piece of research since people are revealing private and confidential information. The risks involved in research range from trivial to severe and transient to long-term. The risks can also be social, physical, psychological, and economic. In this instance, the risk was more psychological and social since the participants had to give personal information that could be potentially traumatizing. As an ethical consideration, this research ensured that the inconveniences and risks were minimized for high success. A person having to leave their normal activities to participate in the study must do so at their behest or see enough incentives to influence their decisions.

To guarantee the validity of the research, an independent review was carried out. This review also minimized all potential conflicts of interest. This also ensured the ethical acceptability of the study before commencement (Polonsky & Waller, 2019). Reviewing the proposal and asking essential questions was critical to the success of the research. These crucial questions centered on the bias, participants protection, ethical design of the study to guarantee favorable risk-benefit ratio favorably and monitoring or quality control. When it came to informed questions, it was essential to ensure the participants decide independently and freely. It was necessary to share accurate information with the participants and explain the benefits and risks to them to make their decisions.

Voluntary decisions were essential for the participants. The participants were treated with their deserved respect to protecting their social values. This was the principle from the beginning when approaching the individuals and throughout the entire process. Respect for the participants begins with respecting their confidentiality and privacy (Polonsky & Waller, 2019). The participants' rights to make contrary decisions to the project remain supreme and should not attract any penalties (Callahan, 2019). The participants must always be given any new arising information during the research. This is necessary, especially if the new data is likely to change the risk-benefits assessments during the participation process. It was essential to monitor the participants' welfare and ensure they did not get unexpected effects of revealing their information. Sharing the knowledge and findings with the participants during the study was also essential.

Summary

This chapter outlined the research methodology used to answer the research questions. A discussion of the procedure, study participants, surveys, interviews, and the data collection process.

Chapter Four: Results

Introduction

This chapter presents the results of this qualitative study. The study aimed at examining the retention rates of high-school students regarding the curriculum related to personal finance courses, as required by Missouri, and how these retention rates impacted these students' financial literacy and higher credit score ratings after course completion. A mixed study was chosen to clarify and explain relationships found to exist between variables. It allowed the researcher to explore relationships between variables in-depth and confirm or cross-validate associations discovered between variables. Qualitative methods were compared to see if they converged on a single interpretation of a phenomenon. Based on the research problem, purpose, and the research frameworks, the data gathered were used to address the following research questions:

Research Question 1: What financial information was retained by students after taking a personal finance course and why?

Research Question 2: Which areas in the personal finance course do high school students need to have addressed at the college/university level?

Research Question 3: Should personal finance courses be taught at the high school or collegiate level or both?

This chapter describes the study purpose, research questions, study setting, and the data collection procedures. The following section presents the quantitative and qualitative data analysis processes. Then, in the following section, a description of evidence of trustworthiness is presented. Then a detailed description of the results is presented and a summary of results is provided.

Setting

The study focussed on the school setting located in Missouri and divided into seven regions: Northwest, Northeast, West Central, Mid-Missouri, East Central, Southwest, and South-eastern. The regions and districts represented in the study were of different sizes and included suburban, urban, rural, private, and public schools. A randomized process was utilized to select target Counties within the regions, and subsequently, 46 school districts were selected. Study participants were recruited with the support of school Superintendents, Assistant Superintendents, and Coordinators.

Participant Demographics

The study included two participant types: teachers and former high school students. Sixteen teachers and 16 students participated in the surveys. 15 of the teachers who took part in the survey were females and one male, whereas 16 of the students were females. Three high school teachers participated in the qualitative survey. The three teachers taught personal finance, family and consumer science, and microeconomics course in Missouri high schools. Four students participated in the qualitative interviews, and they had graduated from a Missouri high school between 2015 and the time of the study. Fifteen of the teachers who participated in the qualitative interviews were females and one male, and 16 of the students who participated in the qualitative interviews were females. Table 4 indicates the credit scores for the four students who participated in the qualitative interviews.

Table 4
Characteristics of Students in the Qualitative Study

Participants Pseudonym	Grade	Credit Score
PS1	B	647
PS2	A	720
PS2	A	741
PS3	A	767

Note: P=Participant; S=Student

Data Collection

The study utilized qualitative data collection methods. Data included a survey that was collected using *Qualtrics* web-based software. *Qualtrics* is a user-friendly software that allows researchers to create surveys and participants to self-administer the tools. The researcher conducted qualitative interviews via phone, and they took an average of 20 minutes. The researcher had a target population of 50; 32 volunteered to participate by submitting a signed consent form where 16 were students and 16 teachers.

Survey

This section provides a detailed description of the data analysis process. Data were collected through a survey that included 20 questions aimed at evaluating the relationship between financial literacy and the successful completion of high-school personal finance courses. The survey provides descriptions of the agreeability level of both teachers and students in relation to each question separately. Before presenting these results, an overview of the data analysis is provided.

The survey used a five-Point Likert Scale to measure the agreeability level of the responses in relation to specific questions. There were 20 questions scheduled for a response. As much as there were five options on the scale, it was not a requirement that all the choices be chosen.

Qualitative Analysis

A thematic analysis was carried out guided by the six steps according to Braun and Clarke (2006). The first step was data familiarization intended to provide an overview of the entire interview data set. In the second step, the identification of codes that supported the research questions. Themes were then determined in the third step. The fourth step entailed the validation of identified themes by appraising them against the original data. The fifth step was the definition of themes by assigning names to clarify the importance of each theme in addressing the research questions. The final step was the composite description of themes within the context of the research questions.

Evidence of Trustworthiness

Consistency checks were incorporated into the mixed study, such as the researcher devoting adequate time to familiarize with the study context and participants. A literature review guided identification of the most significant characteristics to address the research questions. Study participants and their context have been sufficiently described to ensure transferability to others unfamiliar with the study context. The research processes were documented to ensure dependability and confirmability. The researcher’s academic chair reviewed the study to ensure the study's overall transparency and credibility.

Results

This section triangulates findings from the survey and the qualitative interviews. Similarities and contrast of results from the two data sets are highlighted in each of the result areas. Table 5 indicates the various result areas that address the research questions.

Table 5

Research Questions, Result Areas, and Data Sources

Research Questions	Result Areas	Data Sources
RQ1: What financial information was retained by students after taking a personal finance course and why?	Result Area 1: Types of financial information retained from personal finance courses	Qualitative and Survey data
	Result Area 2: Most students and teachers reported that various personal finance topics had positive impact on financial literacy	Survey data Survey data
RQ2: Which areas in the personal finance course do high school students need to have addressed at the college/university level?	Result area 3: Teachers' and students' perceptions on students' unmet personal finance needs	Qualitative data
RQ3: Should personal finance courses be taught at the high school or collegiate level or both?	Result Area 4: At what level should personal finance courses be taught?	Survey and qualitative data

RQ1: What Financial Information Was Retained by Students After Taking a Personal Finance Course and Why?

The first research question aimed at assessing the information retained by the students after taking a personal finance course, and two result areas were found to address it. The first result area discusses the types of financial information retained by students. The second result area indicates teachers' and students' perceptions of various personal finance topics on financial literacy. In the section below, the result areas are discussed.

Theme Area 1: Types of Financial Information Retained from Personal Finance Courses. Students in the qualitative interviews reported that they had retained the following information from personal finance courses: credit card, balancing a chequebook, savings, and credit and its value. All four participants listed "credit card" as a learning outcome; three out of four participants listed "balancing a chequebook;" while two listed "balancing a chequebook, credit cards, and savings."

Students in the survey indicated that they checked their credit scores frequently, including monthly, every three to four months, and every six months. Students checked their scores more frequently than the teachers' group that checked their credit scores once a year. The higher rate of credit score checking among the student group may indicate compliance with the advice given by their teachers (such as PT 2, who taught students to check their credit every two months to monitor for identity theft), or it may indicate high engagement with personal finance and financial responsibility among the student group.

Result Area 2: Most Students and Teachers Reported That Various Personal Finance Topics Had Positive Impact on Financial Literacy. This result area presents the impact of various personal finance methods on financial literacy, as indicated by teachers and students who participated in the survey. Most of the survey participants (teachers and students) indicated that the following finance topics impacted students' financial literacy: goals and decision, career and planning, budgeting and financial literacy, banking services, saving and investing, credit, and computer skills topics. Survey participants also indicated that providing information to students in the following areas impacted the student's financial literacy, income, money management, spending and credit, and saving and investing.

The Impact of Goals and Decision Personal Finance Topics on Financial Literacy. The study examined the impact of goals and decisions on financial literacy. Among the students, 69% agreed that the study's goal and decision topic influenced their financial literacy. On the other hand, 87% of the teachers stated that goals and decision topics impacted financial literacy. Table 6 presents more information on the impact of goals and decisions on financial literacy.

Table 6

Frequency Analysis Examining the Impact of Goals and Decision Personal Finance Topics on Financial Literacy

Response	Students		Response	Teachers	
	N	%		n	%
Strongly Agree	9	56	Definitely Yes	9	56
Somewhat Agree	2	13	Probably Yes	5	31
Neither Agree/nor Disagree	2	13	Might or Might not	2	13
Somewhat Disagree	2	13	Probably Not	0	0
Strongly Disagree	1	6	Definitely Not	0	0
Total	16	100		16	100

The Impact of Career and Planning Personal Finance Topics on Financial Literacy. Career and planning topics discuss financial planning related to career development, such as financing student education. The study showed that 56% of students "strongly" agreed to a relationship between career and planning and financial literacy, with 100% of the teachers agreeing to this idea. Table 7 illustrates the impact of Career and Planning on financial literacy.

Table 7

Frequency Analysis Examining the Impact of Career and Planning Personal Finance Topics on Financial Literacy

Response	Students		Response	Teachers	
	n	%		n	%
Strongly Agree	9	56	Definitely Yes	10	63
Somewhat Agree	1	6	Probably Yes	6	38
Neither Agree/nor Disagree	3	19	Might or Might not	0	0
Somewhat Disagree	0	0	Probably Not	0	0
Strongly Disagree	3	19	Definitely Not	0	0
Total	16	100		16	100

The Impact of Budgeting and Financial Literacy Topics on Financial Literacy. From the study, 75% of students agreed that the budgeting topic under the personal finance course influenced their financial literacy, with 100% of the teachers supporting this idea. Table 8 indicates the impact of budgeting on financial literacy.

Table 8

Frequency Analysis Examining the Impact of Budgeting Topics on Financial Literacy

Response	Students		Response	Teachers	
	n	%		n	%
Strongly Agree	7	44	Definitely Yes	13	81
Somewhat Agree	5	31	Probably Yes	3	19
Neither Agree/nor Disagree	2	13	Might or Might not	0	0
Somewhat Disagree	1	6	Probably Not	0	0
Strongly Disagree	1	6	Definitely Not	0	0
Total	16	100		16	100

The Impact of Banking Services Topics on Financial Literacy. From the study, 57% of the students agreed that banking services influenced financial literacy after graduation, with 100% of the teachers supporting this claim. Table 9 indicates the impact of banking services topics on financial literacy.

Table 9

Frequency Analysis Examining the Impact of Banking Services Topics on Financial Literacy

Response	Students		Response	Teachers	
	n	%		n	%
Strongly Agree	7	44	Definitely Yes	15	94
Somewhat Agree	2	13	Probably Yes	1	6
Neither Agree/nor Disagree	4	25	Might or Might not	0	0
Somewhat Disagree	1	6	Probably Not	0	0
Strongly Disagree	2	13	Definitely Not	0	0
Total	16	100		16	100

The Impact of Saving and Investing Topics on Financial Literacy. Students were asked to respond to the question to determine the impact that saving and investing topics had on a graduate's financial literacy. Among the students, 44% strongly agreed that saving and investing topics impacted financial literacy, and an additional 25% somewhat agreed with this statement. Table 10 illustrates the impact of saving and investing topics on financial literacy.

Table 10

Frequency Analysis Examining the Impact of Saving and Investing Topics on Financial Literacy

Response	Students	
	N	%
Strongly Agree	7	44
Somewhat Agree	4	25
Neither Agree/nor Disagree	1	6
Somewhat Disagree	0	0
Strongly Disagree	4	25
Total	16	100

The Impact of a Credit Topic on Financial Literacy. From the study, 69% of the students agreed or strongly agreed that credit topics influenced their financial literacy, with 13% neither agreeing nor disagreeing, and 25% strongly disagreeing with this idea. On the other hand, all the teachers in the sample supported the idea that credit topics impacted participants' financial literacy. Table 11 illustrates the impact of credit topics on financial literacy.

Table 11

Frequency Analysis Examining the Impact of Credit Topics on Financial Literacy

Response	Students		Response	Teachers	
	n	%		n	%
Strongly Agree	9	56	Definitely Yes	13	81
Somewhat Agree	2	13	Probably Yes	3	19
Neither Agree/nor Disagree	1	6	Might or Might not	0	0
Somewhat Disagree	0	0	Probably Not	0	0
Strongly Disagree	4	25	Definitely Not	0	0
Total	16	100		16	100

The Impact of Computer Skills Topics on Financial Literacy. Based on the findings from this study, 50% of the students strongly agreed that learning about computer skills in their personal finance courses impacted their financial literacy, with 19% somewhat agreeing with this idea, 13% neither agreeing nor disagreeing, and 19% somewhat disagreeing. On the other hand, 88% of the teachers stated, "definitely yes," with an additional 13% stating, "probably yes," when asked if computer skills topics impacted participants' financial literacy. Table 12 illustrates the impact of computer skills topics on financial literacy.

Table 12

Frequency Analysis Examining the Impact of Computer Skills Topics on Financial Literacy

Response	Students		Response	Teachers	
	N	%		n	%
Strongly Agree	8	50	Definitely Yes	14	88
Somewhat Agree	3	19	Probably Yes	2	13
Neither Agree/nor Disagree	2	13	Might or Might not	0	0
Somewhat Disagree	3	19	Probably Not	0	0
Strongly Disagree	0	0	Definitely Not	0	0
Total	16	100		16	100

The Impact of Information on Income on Financial Literacy. From the study, 50% of the students strongly agreed that providing information on income in personal finance courses influenced their financial literacy. An additional 19% of the students somewhat agreed with this idea, while 13% were not sure, and 19% somewhat disagreed. On the other hand, 100% of the teachers either reported "definitely yes" or "probably yes," when asked if the income information impacted financial literacy. Table 13 indicates the impact of information about income on financial literacy.

Table 13

Frequency Analysis Examining the Impact of Information on Income on Financial Literacy

Response	Students		Response	Teachers	
	N	%		n	%
Strongly Agree	8	50	Definitely Yes	14	88
Somewhat Agree	3	19	Probably Yes	2	13
Neither Agree/nor Disagree	2	13	Might or Might not	0	0
Somewhat Disagree	3	19	Probably Not	0	0
Strongly Disagree	0	0	Definitely Not	0	0
Total	16	100		16	100

The Impact of Information on Money Management on Financial Literacy. This study examined the impact of information on money management on financial literacy. Among the students, 69% either agreed or strongly agreed that money management topics helped them after graduation from high school, with 25% neither agreeing nor disagreeing and 6% disagreeing. On the other hand, only 6% of the teachers responded, "definitely yes," when asked if money management topics influenced financial literacy. An additional 38% responded, "probably yes," while 44% were unsure, and 12% agreed or strongly agreed with this idea. Table 14 indicates the impact of money management topics on financial literacy.

Table 14

Frequency Analysis Examining the Impact of Money Management Topics on Financial Literacy

Response	Students		Response	Teachers	
	N	%		n	%
Strongly Agree	8	50	Definitely Yes	1	6
Somewhat Agree	3	19	Probably Yes	6	38
Neither Agree/nor Disagree	4	25	Might or Might not	7	44
Somewhat Disagree	1	6	Probably Not	1	6
Strongly Disagree	0	0	Definitely Not	1	6
Total	16	100		16	100

The Impact of Information on Spending and Credit on Financial Literacy. Only students were asked to respond to the question to collect information on the impact of spending and credit on the respondents' financial literacy. Among the students, 75% either strongly agreed or agreed that providing information on spending and credit helped them after graduation from high school. On the other hand, 13% neither agreed nor disagreed with this idea, and 13% somewhat disagreed. Table 15 indicates the impact of information on spending and credit on financial literacy.

Table 15

Frequency Analysis Examining the Impact of Information on Spending and Credit on Financial Literacy

Response	Students	
	n	%
Strongly Agree	8	50
Somewhat Agree	4	25
Neither Agree/nor Disagree	2	13
Somewhat Disagree	2	13
Strongly Disagree	0	0
Total	16	100

The Impact of Information on Saving and Investing on Financial Literacy

Only students were asked to respond to the question aimed at establishing the association between skills learned through studying saving and investing topics and the level of financial literacy of the participant. From the study, 50% of the students reported that they strongly agreed that saving and investing topics impacted their financial literacy, and an additional 25% somewhat agreed with this statement. Table 16 indicates the importance of information on savings on financial literacy.

Table 16

Frequency Analysis Examining the Impact of Information on Saving and Investing Topics on Financial Literacy

Response	Students	
	N	%
Strongly Agree	8	50
Somewhat Agree	4	25
Neither Agree/nor Disagree	3	19
Somewhat Disagree	1	6
Strongly Disagree	0	0
Total	16	100

RQ2: Which Areas in the Personal Finance Course Do High School Students Need to Have Addressed at the College/University Level?

The second research question aimed at assessing the gaps in the personal finance course that students needed to have addressed at the college or University Level, and one result area was found to address it. In the result area, the various unmet personal finance needs of students are discussed by students and teachers.

Theme Area 3: Teachers' and Students' Perceptions on Students' Unmet Personal Finance Needs. Students highlighted additional support for financial resources and information needs, including investing, budgeting, credit and reading contracts, and savings. Budgeting, savings, and investments were essential areas where all participants required additional support. PS 1 stated:

> Investing - I do not know much about (it) and would like to grow my money.
>
> Budgeting— I need to do a better job at budgeting.
>
> Credit and reading contracts - understanding the small print

Participant Student (PS) 2 stated, “Savings, how to do so properly without feeling broke all the time.”

On the other hand, teachers lacked clarity on the personal finance needs of students. They identified several areas where students needed the most learning, as follows: using cheques, budgeting, behavioral economics, and reading contracts (for cars and homes and high-end purchases), investment savings, government taxes, and cost of family/child-rearing. Participant Teacher (PT) 2 further added that all the information was new to the students, making every component of the course: Managing your income" a top and a priority area for teaching. PT 2 stated:

> The student to comprehend in great depth the financial responsibility to self and all their various communities, including government taxes and then their financial obligation to bring a child into the world: Truth be told, all of “managing your income” was extremely important and well received by my students; they had no prior exposure to this information. (PT2)

On the other hand, students identified topics in which they needed additional information, including Investing and Budgeting, Personal Finance, Micro-Economics, and Family Consumer Science. All four participants reported "Investing" as an area they would like more information.

RQ3: Should Personal Finance Courses be Taught at the High School or Collegiate Level or Both?

The third research question aimed at identifying the finance courses that should be taught at the high school or collegiate level, and one result area was found to address it. The result area contains teachers' and students' perceptions about the level at which personal finance should be taught.

Result Area 4: At What Level Should Personal Finance Courses be Taught? Students in the qualitative study had mixed perceptions on whether personal finance should be taught at the high school or collegiate level. One participant argued that it should be taught in high school as an introduction. Two other participants thought it should be taught at both high school and college levels. One participant did not specify whether it should be taught at high school or collegiate level, simply stating, "yes."

The reasons proposed by PS 1 to explain why personal finance should be taught in high school as an introduction is that it helps the individual handle money. PS1 stated that:

> It should be taught at high school as an introduction and then again as to help with reviewing or making sense of money, especially since a person handle more and more money and is trying to get loans. (PS1)

On the reasons why personal finance should be taught at both school and collegiate levels, PS 2 and PS 4 observed that increasing financial responsibility occurs as a person grows. The individual will require more finance skills, such as investing skills. Such courses provide more skills, guidance, and information for financial investment, such as participation in the stock market. PS 3 stated that personal finance skills "are a valuable skill to learn to create a financial life for success."

On the other hand, survey findings indicated that all students thought that personal finance should be taught in high school. All the student respondents "strongly" agreed that personal finance should be taught in high school, with 94% of the teachers supporting the idea. On the other hand, 6% of the teachers were not sure about the idea of teaching personal finance in high school. Table 17 indicates the preferred level of study by students and teachers.

Table 17

Frequency Analysis Examining the Preferred Level to Study a Personal Finance Course

Educational Level	Response	Students		Response	Teachers	
		N	%		n	%
High School	Strongly Agree	14	88	Definitely Yes	14	88
	Somewhat Agree	2	13	Probably Yes	1	6
	Neither Agree/nor Disagree	0	0	Might or Might not	1	6
	Somewhat Disagree	0	0	Probably Not	0	0
	Strongly Disagree	0	0	Definitely Not	0	0
Total		16	100		16	100
Collegiate	Strongly Agree	6	38	Definitely Yes	2	13
	Somewhat Agree	2	13	Probably Yes	4	27
	Neither Agree/nor Disagree	1	6	Might or Might not	7	47
	Somewhat Disagree	1	6	Probably Not	2	13
	Strongly Disagree	6	38	Definitely Not	0	0
Total		16	100		15	100

On the contrary, the study found that 51% of student respondents stated that personal finance courses should be taught at the collegiate level, with 40% of the teachers agreeing to this idea. On the other hand, 47% of the teachers were unsure if the course should be taught at the collegiate level.

From the study, 69% of the students either “strongly or somewhat” agreed there was a correlation between the grade a person scores in a personal finance course in high school and their financial literacy, with 19% disagreeing. On the other hand, 63% of the teachers stated "definitely yes or probably yes" when asked if a high school grade in a personal finance course influenced their financial literacy, with 19% refuting. Therefore, the grade a person scores in a personal finance course in high school impacts their understanding of financial management in the future.

Table 18

Frequency Analysis Examining the Impact of Study Duration on Mastery

Duration	Response	Students		Response	Teachers	
		n	%		n	%
Over a Single Semester	Strongly Agree	2	13	Definitely Yes	4	25
	Somewhat Agree	3	19	Probably Yes	5	31
	Neither Agree/nor Disagree	4	25	Might or Might not	4	25
	Somewhat Disagree	6	38	Probably Not	2	13
	Strongly Disagree	1	6	Definitely Not	1	6
Total		16	100		16	100
Over an Entire Year	Strongly Agree	10	63	Definitely Yes	5	31
	Somewhat Agree	3	19	Probably Yes	10	63
	Neither Agree/nor Disagree	3	19	Might or Might not	0	0
	Somewhat Disagree	0	0	Probably Not	0	0
	Strongly Disagree	0	0	Definitely Not	1	6
Total		16	100		16	100

Table 19

Frequency Analysis Examining the Correlation of Personal Finance Course, High School Grade, and Financial Literacy

Response	Students		Response	Teachers	
	N	%		N	%
Strongly Agree	7	44	Definitely Yes	8	50
Somewhat Agree	4	25	Probably Yes	2	13
Neither Agree/nor Disagree	2	13	Might or Might not	3	19
Somewhat Disagree	1	6	Probably Not	2	13
Strongly Disagree	2	13	Definitely Not	1	6
Total	16	100		16	100

Summary

This study aimed to examine high-school students' retention rates regarding the curriculum related to personal finance courses, as required by Missouri, and how these retention rates impacted the students' financial literacy and higher credit score ratings after course completion. The study setting was 46 school districts in Missouri from which teachers and students were selected to participate in the study. Based on the research problem and purpose, three research questions were identified. The results have been summarized in response to the three research questions.

RQ1: What financial information was retained by students after taking a personal finance course and why? Two result areas addressed the first research question, and the first one discusses the types of financial information students retain. The second result area indicates teachers' and students' perceptions of various personal finance topics on financial literacy. Financial information retained by students on personal finance included credit cards, balancing a cheque, savings, and credit. Students also reported that they frequently monitored their credit scores, indicating retention of information on financial responsibility. The second result area indicated that most of the students and teachers thought that the following personal finance topics had an impact on financial literacy. Topics discussed included goals and decision of personal finance, career and planning, budgeting, banking services, credit, computer skills, information on income, money management, spending and credit, and information on saving. Most students did not find saving and investing information to impact financial literacy.

RQ2: Which areas in the personal finance course do high school students need to have addressed at the College/University level? Qualitative data indicated that students had numerous unmet personal finance needs, including investing, budgeting, credit and reading contracts, and savings. On the other hand, teachers identified writing cheques, Behavioral Economics, and reading contracts (for cars and homes and high-end purchases), Investment Savings, Government Taxes, and Cost of Family/Child. Students' other topics included personal finance, Micro-Economics, and Family Consumer Science.

RQ3: Should personal finance courses be taught at the High School or Collegiate Level or Both? One result area was found to address this research question, and it constituted both qualitative and quantitative data. Most students and teachers who participated in the survey thought that high school should teach personal finance. Mixed findings were found from the qualitative study where some thought it should be taught in high school, some in both high school and college, and one was not clear in their response.

Most study respondents (teachers and students) agreed that there was a correlation between the grade a person scores in a personal finance course in high school and their financial literacy. Therefore, the grade a person scores in a personal finance course in high school impacts their understanding of financial management in the future.

Chapter Five presents conclusions based on these findings.

Chapter Five: Discussion and Conclusion

Introduction

The study utilized a qualitative design to examine the retention rates of high-school students regarding the curriculum related to personal finance courses, as required by Missouri, and how these retention rates impacted these students' financial literacy and higher credit score ratings after course completion.

The study setting included 46 school districts in Missouri from which teachers and students were selected to participate in a survey and qualitative interviews. Based on the research problem and purpose, three research questions were identified. The following section summarizes the key results from each research study.

RQ1: What financial information was retained by students after taking a personal finance course and why? The findings indicate that the financial information retained by students on personal finance included information on credit cards, balancing a cheque, savings, and credit. All the students said that they frequently monitored their credit scores, indicating retention of information on financial responsibility.

The second result area indicated that most of the students and teachers thought that personal finance topics had an impact on financial literacy. Participants reflected on the following finance topics: goal and decision of personal finance, career and planning, budgeting, banking services, credit, computer skills, information on income, money management, spending and credit, and information on saving. Most students reported that saving and investing information had no impact on financial literacy.

RQ2: Which areas in the personal finance course do high school students need to have addressed at the College/University level? Participants indicated various unmet personal finance needs, including investing, budgeting, credit and reading contracts, and savings. On the other hand, teachers identified the following needs for students: writing cheques, Behavioral Economics, and reading contracts (for cars and homes and high-end purchases), Investment Savings, Government Taxes, and Cost of Family/Child. In addition, students pointed out more topics, such as personal finance, Micro-Economics, and Family Consumer Science.

RQ3: Should personal finance courses be taught at the High School or Collegiate Level or Both. One result area was found to address this research question, and it constituted both qualitative and quantitative data. Most students and teachers who participated in the survey thought that high schools should teach personal finance. Mixed findings were found from the qualitative study where some students thought that personal finance should be taught in high school, some in both high school and college, and one was not clear in their response.

Most study respondents (teachers and students) agreed that there was a correlation between the grade a person scores in a personal finance course in high school and their financial literacy. This finding suggests that the grade a person scores in a personal finance course in high school impacts their understanding of financial management in the future.

Interpretation of the Findings

The present research explored the connection between success in a personal finance class and credit score. As stated in Chapter One, the personal finance class determines the level of an individual's financial rapport. Callaghan et al. (2020) claimed that as soldiers, through their finance class, they gain the necessary financial tools and techniques applicable in determining the level of understanding of their finances. Further, Callaghan et al. (2020) stated that attending finance class, whether in high school or college, had a positive impact on an individual's level of financial understanding. Callaghan et al. (2020) conducted a study to determine the correlation between financial classes and a student's credit score in the future. The researcher used a sample of 500 retired teachers. This sample was good enough for the study since most other professions may not have the same experience in terms of financial management as the target population. Callaghan et al. (2020) concluded a positive correlation between personal finance class and credit score from the study.

To be more precise, Callaghan et al. (2020) asked the respondents to explain why personal finance class performance positively correlated with an individual's futuristic credit score. There was a series of coded reasons why people fell victims to credit scores in different capacities, based on their personal finance class performance. However, two reasons formulated more than 75% of the general response to the question. One, those who performed highly in personal finance class were interested in money management. This was the main reason the sample explained why the personal finance class influences futuristic credit scores. Callaghan et al. (2020) expounded on the response, stating the respondents believed that only those interested in a subject would perform highly in it.

Callaghan et al.'s (2020) study aimed at determining the effectiveness of the subject when taught at primary or secondary levels. From this study, 60% of the respondents stated that the level at which the subject was taught also mattered in the latter application—according to Callaghan et al. (2020), teaching a concept when one is younger aims at helping them pass the exam when tested on the same concept. Callaghan et al.'s (2020) theory applied to the 20% who claimed students who did the personal finance class just to pass the exam.

From the study, only 12% of the respondents claimed one could apply personal finance management techniques they learned in primary in the future. On the other hand, 57% stated being exposed to personal finance at the secondary level increased the chance of applying the technique by 75% in the future, improving one's credit score. Callaghan et al. (2020) claim financial knowledge development progresses with age and responsibilities. As one grows, they imply financial responsibilities. At the primary level of education, less than 4% of the United States' students fend for themselves, contrary to the 36% at the secondary level (Callaghan et al., 2020). This implies the primary students have fewer or no responsibilities that compel them to apply the personal finance techniques they learn at that level. On the other hand, the larger population fending for themselves at the secondary level compels them to apply the techniques learned in real life.

From this study, 74% of the students either "strongly or somewhat" agreed there is a correlation between the grades a person scores in a personal finance course in high school and their financial literacy, with 13% disagreeing. On the other hand, 63% of the teachers stated "definitely yes or probably yes" when asked if a high school grade in a personal finance course influenced their financial literacy, with 13% refuting. The 74% of students who responded that passing a personal finance class had a correlation with futuristic credit score is high enough to suggest there is a relationship. The pre-empted prediction of the relationship between credit score and personal finance class could be refuted if a much lesser percentage had reported success in a personal finance class and a high credit score. In this case, both teachers and students supported that personal finance performance measured the level of financial literacy of an individual. Tycho Press (2019) supports the idea that 78% of those who score highly in the personal finance class can be elite money managers. On the contrary, those who fail to understand the basics of financial management tend to rely on factors that could derail their performance, as far as money management is concerned.

According to Tycho Press (2019), students believe there is a positive correlation between personal finance class performance and financial literacy. This implies that a person who performs highly in a personal finance course has a higher chance of scoring higher credit cards. This is not evident from a provable perspective, but pre-empted by the students. They base their arguments on observable events. For instance, they may have witnessed their parents practicing money management skills which they had learned. They may also observe friends and families opting to exercise their finance knowledge in managing finances amicably. This makes it easier for them to basely settle, because higher performance in the personal finance class attributes higher financial literacy.

Ramsey (2019) defines financial literacy as the ability to keep track of one's finances to understand the profit and losses incurred in the process for futuristic money management decisions. Ramsey (2019) claims one has to acquire basic financial knowledge to manage any form of finance. Precisely, one has to understand the basics of economics to handle finances. A financially literate person possesses the basic money management skills that enable them to identify and understand financial nitty-gritty. Subject preference, attitude, and the willingness to pursue knowledge about finances formulate the three basic requirements determining one’s financial literacy (Ramsey, 2019). Like every other subject, one has to have a soft spot for a finance class to achieve higher scores. According to Ramsey (2019), 89% of students that score straight A(s) in finance have a higher subject preference. They do not only like the subject but also prefer the subject to others. Subject preference increases the likelihood to opt for the subject amidst others. Secondly, attitude defines the will to go through the basics of the subject and apply the concept to solve real-life problems. According to Ramsey (2019), attitude defines the level of sacrifice one could spare to learn a concept. Ramsey (2019) states those with negative attitudes about a subject have a lower chance of succeeding. On the contrary, those who have even the slightest positive attitude towards a subject have a higher chance of mastering the concept in one way or the other. Once mastered, the student applies the same in solving real-life situations. The will to pursue the subject is the third factor determining success in personal finance. According to Ramsey (2019), the will to pursue the concepts of a subject defines the level of understanding of the subject when it ends. One understands the concept when they are willing to pay attention to the concept being taught. One also has a higher passing tendency when they are willing to go the extra mile to conduct research or revise the taught concept over a period to sharpen their mastery (Ramsey, 2019). Further, the will to take a chance on a subject also defines the urge to succeed. According to Ramsey (2019), there are various subjects students are exposed to in primary and secondary. The willingness to focus on personal finance is an indication of preference and the will to learn. All the three factors combined define the extent of success of a student in acquiring financial literacy.

According to Harrison (2019), a student who succeeds in pursuing and passing highly in a personal finance class has a 25% less chance of going bankrupt. Harrison (2019) states bankruptcy is financial incapability to service the basic needs, as well as other financial needs opting to file for bankruptcy to be protected from debtors with a structured repayment plan. In most cases, companies rather than individuals tend to file for bankruptcy. Harrison (2019) claims it is easier for companies to be declared bankrupt than an individual, based on the level of service provision. Whenever a company fails to provide basic services to its clients, defaults on loan repayments, and declines in production, its stakeholders tend to question the company's financial capabilities. According to Harrison (2019), 9 out of 10 companies incapable of providing basic services to their esteemed clients face adverse financial problems that may escalate to bankruptcy. Harrison (2019) connects bankruptcy to personal finance at the high school level. Harrison (2019) claims students who perform quite highly in personal finance classes have a 75% chance of avoiding bankruptcy by either detecting it earlier or formulating strategies that prevent the occurrence.

The study finds a larger percentage of teachers and students support those financial courses should be taught in high school, which answers the third research question. A lower percentage of the respondents stated it should be taught at the collegiate level. According to Garrett (2019), 75% of college students are exposed to financial issues. They understand the basics of money management, hence would want to learn more about the technique early enough. Garrett (2019) claims that studying personal finance at high school level increases a person’s view of finances and increases the applicability chances in fundamental areas. Garrett (2019) also claims not everyone goes to college, thus the need to teach students the subject early enough. According to Garrett (2019), college is a surplus in the education system, implying one may or may not opt to attend. Therefore, there is the need to introduce the topic at the basic level where everyone else can study. Further, Garrett (2019) claims collegiate levels are the predominantly specializing levels of education. In other words, students tend to specialize in various subjects when they attend college. Unlike the primary and secondary levels, where students are compelled to learn all other subjects, the college levels offer the freedom to drop some units unnecessary for one’s course. Therefore, offering the subject in colleges would imply only a section of the students will study the subject. On the contrary, planning the subject in high school provides an opportunity for all other students to do the subject. Garrett (2019) claims even a 25% exposure to a subject sparks interest and increases mastery. Based on this logic, even without an extended commitment in personal finance, once a student is subjected to the topic, they already have the taste and preference set out for it. This informs their judgment based on the context of the subject.

According to Garrett (2019), high school champions for universality in subjects taught. Students are exposed to various subjects equally. Unlike at the college level, one does not choose to focus on one subject based on their preference. Everyone gains the same knowledge at the same time and at the same intensity.

From the study, a smaller percentage of students, lesser than teachers, agreed that the personal finance class concept taught within a semester might attract a higher mastery. This idea is not fully supported by the students who took part in the study. On the other hand, more teachers agreed that teaching a subject for a year increases mastery. Bien et al. (2021) define mastery as the ability of the student to read, understand, and comprehend an idea with the knowledge to deliver the same information in a different context but with a real meaning. This enables students to understand the concept taught easier for futuristic use. As often said, practice makes perfect; continued exposure to a concept over a certain period increases mastery, hence applicability. Mastery motivation, task difficulty, and relatability formulate the major factors influencing mastery. According to Bien et al. (2021), mastery motivation is the reward emanating from mastering a concept. The reward may be in the form of a gift or a feeling. One may feel proud when they are able to answer a difficult question in class (Bien et al., 2021). One may also feel horrible when they cannot define a term that the teacher just defined. On the other hand, motivation may be a gift. One may be gifted if one answers a given question. They may also be rewarded to boost their morale to do more. Further, the level of difficulty of the task also determines mastery. Very complex topics are rarely mastered with clarity compared to easier topics. In addition, one may reproduce an easier definition compared to more complex ones. Finally, a relatable topic is easier to understand, and master compared to complex ones. The three factors go hand in hand when it comes to mastery.

To evaluate the correlation between mastery and study duration, Bien et al. (2021) conducted a study with a sample of 400 high school students. The control group was subjected to a concept for one week. The experiment group was divided into three. The first group was taught a concept for a week. The second group was taught for 5 days and the third for 2 days. They were asked to reproduce a definition that implied the major topic studied. Bien et al. (2021) collected the data and conducted a regression analysis to determine time's impact on mastery. The regression output showed a statistically significant relationship between time and mastery since the *p*-value was lower than .05, rejecting the null hypothesis. This implies that mastery decreases or increases with decrease or increase in time, respectively. Bien et al. (2021) concluded that those exposed to a topic for more than a week had a greater mastery than those subjected for 5 and 2 days. Further, those who were taught for 5 days showed a better understanding of the topic than those taught within 2 days. From the study, those taught within 2 days showed less mastery of the topic than all the others. The study concludes a direct correlation between time and mastery.

More teachers than students agreed that there should be a test at the end of every finance course at both levels. An evaluation tests mastery, implying students are tested to check their level of reproducing a concept as taught in the classroom. The students’ scores determine their mastery levels. This is the same in personal finance.

It is only logical that students are tested to determine their levels of understanding. From the tests, the teacher depicts weaknesses and strengths, which would inform a futuristic teaching plan. Saeedi and Hamedi (2018) claim various studies have shown a positive correlation between accepting to be tested and personal finance among students. It is not every day that students will be happy to be tested. According to Saeedi and Hamedi (2018), only 20% of high school and 15% of college students fancy the idea of an exam. Saeedi and Hamedi (2018) claim students prefer being examined once a year than a semester. To prove this claim, Saeedi and Hamedi (2018) conducted a study with 400 students. They were asked to respond with 1 or 2 where 1 was “Examined every semester” and 2 “examined every year.” The researcher outlined the objective of the study. The respondents were also informed they could withdraw from the study at any time without any consequences. From the study, 85% of the students responded they preferred annual rather than semester examination.

According to Saeedi and Hamedi (2018), a personal finance examination depicts the level of understanding of an individual in relation to their mastery. The test determines the capability and competency of the individual. If the student fails, their reputation, as far as futuristic job positions is compromised. The exams set records that could be used to hire employees in the future. According to Sahadeo (2018), 50% of students who study personal finance who never get examined, fails to master the concepts learned, leading to financial stress in the future. To prove this claim, Sahadeo (2018) conducted a study using 150 retirees who studied personal finance at the high school level but failed to be examined. From the study, the researchers established that 78% of the respondents who were not tested stated that they did not apply any of the concepts they learned in school due to poor mastery. On the other hand, 89% of those who were tested claimed they apply personal finance principles in every financial decision they make.

Goals and decisions are topics in personal finance. Every topic studied in personal finance influenced the student’s understanding in one way or the other. More students and teachers concurred on a positive correlation between the goals and decision topics and financial literacy from the study. Goals and decisions cover factors influencing money management. Goals define the set of objectives that one intends to achieve within a stipulated time. On the other hand, decisions are the resolution arrived at after some consideration. Zokaityte (2019) claims that a goal is the product of a decision. One has to decide to do something for them to set it as a goal. If one fails to meet the goal, they may also decide to retry or give it more time. Decisions ensure the finance manager makes the best resolution, having considered all other factors. Zokaityte (2019) conducted a study to determine the impact of a goal and decision on financial literacy. The study included 50 retirees. They were asked to avail email addresses to receive the consent form and sign. Then they were issued with a questionnaire, which was to be filled within 72 hours. From the study, Zokaityte (2019) found 65% of the respondents stated learning about goals and decisions increased one’s financial literacy. One respondent stated learning goals and decisions ensure one identifies a problem, analyzes, and proposes a solution based on the analysis. Arthur (2019) supports this claim stating that one who defines the goals before making any financial decision has an 85% chance of avoiding money wastage. The researcher arrived at such a conclusion through an experiment with 210 respondents. The researcher expounded on the objectives of the study, defining the terms of engagement. The respondents were availed with consent forms before participation. From the study, the researcher found 86% of the respondents stated that they created financial goals and worked to achieve them complementarily. On the other hand, 36% stated that making financial decisions without a goal worked slightly better under impromptu circumstances. Working towards achieving goals define the level of commitment of the individual.

Career development and planning is a personal finance topic majoring in career development and planning within finance management. Planning entails crucial finance management steps and procedures. These procedures are used in financial planning, thereby reducing the chances of committing errors during document processing. All teachers agreed on a positive correlation between career development and planning and financial literacy from this study. As one studies the topic, they gain the right knowledge to help with career development and planning within the finance sector. Tyson (2019) claims the personal finance concept relies on career development and planning templates viable for use in finance departments to create crucial invoices, as well as plans along which the plant may operate. In addition, Zokaityte (2019) supports this claim, stating that a student with mastery of personal finance concepts, such as career and planning is 75% likely to make informed financial decisions about finances relating to education. To prove the claim, the researcher conducted a study with a sample of 400 collegiate students—the study aimed at establishing the correlation between mastering careers and planning personal finance concepts and students' loans. The researcher explained the objectives of the study. The students were also informed that they could withdraw at any point without any implications. The researcher found that 75% of students who did not study careers and planning topics accrued more than $10,000 in student loans. On the contrary, 90% of students who attended the careers and planning classes were debt-free. According to the researcher, the debt-free students advised the guardians to simply pay the fee as this would reduce the debt load in the future.

Budgeting is a major topic in personal finance dealing with monetary values. The value that a currency holds in relation to the other categories formulate a series of information that could be used to measure financial literacy through budgeting. This study finds a positive correlation between budgeting topics and financial literacy. Financial literacy is defined by how intelligent one is in their area of operation. Therefore, to become a recognized finance officer, their financial literacy and intelligence have to be checked.

Banking services revolve around issues pertaining to banking services. This goes without saying; banks always employ the most reliable and qualified individuals, based on performance. Hence, they have to be competent in service delivery and possess the right qualities that the company wants. Learning this topic enhances students' knowledge in this sector. The student explores various areas where the skills they have learned can be applied. The student also understands the major issues governing finance management. This study finds a positive correlation between banking services and financial literacy. Tyson (2019) studied the correlation between banking services and financial literacy using a sample of 100 students. They were asked to indicate if the topic improved their learning. From the study, 92% of the respondents stated they were more intelligent about accounting after they attended the banking services training.

Limitations of the Study

This study excluded students who took a personal finance course online or through a virtual environment. This is a significant omission, because many high schools offered various online courses or virtual environments in personal finance to address the students' learning styles or abilities.

COVID-19 played a major part in delimiting the scope of the study. There was less preference for physical interactions and secondary data sources or online interactions encouraged. Secondary sources are limited by inaccuracies and biasness, especially where the emails and Zoom calls interrupted the flow of data. It was not easy to carry out one-on-one interviews. There were downtimes when the network bandwidth fluctuated negatively. There were also cases of poor video quality for participants who opted for video conferencing.

Also, the qualitative study had a relatively small sample and therefore may not be representative of the different sub-groups among study participants, such as students from private school, urban, and rural. Another limitation is that similar studies have looked at the influence of gender on personal finance, a significant topic that was beyond the scope of this study.

Recommendations for Further Research

Further research on personal finance and credit scores should include students taking online finance classes to be relevant in a digitized world. In addition, studies with bigger sample sizes should look at the personal finance and credit scores in different settings, such as private and public schools, urban, and rural schools. Also, a larger population sample will provide a more detailed correlation using a larger dataset. According to Taillard (2020), the correlation between variables increases with an increase in the sample. The more the sample, the more accurate the results of the statistical analysis.

Conclusion

In conclusion, the results of this study indicate that personal finance and class performance have a positive correlation with financial literacy. This is like what Tyson (2019) stipulated, that an individual must attend a personal finance class to gain financial literacy. This implies that those who fail to join live their lives uninformed of the various personal finance techniques applicable in finance management.

References

Aboagye, J., & Jung, J. Y., (2018). Debt holding, financial behavior, and financial satisfaction. *Journal of Financial Counseling and Planning*, *29*(2), pp.208-218.
https://doi.org/10.1891/1052-3073.29.2.208

Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating effect of risk perception on financial knowledge, literacy and investment decision. *American International Journal of Economics and Finance Research*, *1*(1), 34-44. https://doi.org/10.46545/aijefr.v1i1.60

Akhtar, F., & Das, N. (2019). Predictors of investment intention in Indian stock markets. *International Journal of Bank Marketing*, *37*(1), 97-119. https://doi.org/10.1108/IJBM-08-2017-0167

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Ajzen, I., Joyce, N., Sheikh, S., & Cote, N. G. (2011). Knowledge and the prediction of behavior: The role of information accuracy in the theory of planned behavior. *Basic and applied social psychology*, *33*(2), 101-117.

Alkan, O., Oktay, E., Unver, S., & Gerni, E. (2020). Determination of factors affecting the financial literacy of university students in Eastern Anatolia using ordered regression models. *Asian Economic and Financial Review*, *10*(5), 536. 10.18488/journal.aefr.2020.105.536.546

Arianti, B. F. (2018). The influence of financial literacy, financial behavior, and income on investment decisions. *Economics and Accounting Journal*, *1*(1), 1-10. http://dx.doi.org/10.32493/eaj.v1i1.y2018.p1-10

Arofah, A. A., Purwaningsih, Y., & Indriayu, M. (2018). Financial literacy, materialism, and financial behavior. *International Journal of Multicultural and Multireligious Understanding, 5*(4), 370-378. http://dx.doi.org/10.18415/ijmmu.v5i4.171

Arrondel, L. (2018). Financial literacy and asset behavior: Poor education and zero for conduct? *Comparative Economic Studies*, *60*(1), 144-160. https://doi.org/10.1057/s41294-018-0053-9

Arthur, C. (2019). *Financial literacy education: Neoliberalism, the consumer and the citizen*. Rotterdam: Sense Publishers.

Aydemir, S. D., & Aren, S. (2017). Do the effects of individual factors on financial risk-taking behavior diversify with financial literacy? *Kybernetes*, *46*(10), 1706-1734. https://doi.org/10.1108/K-10-2016-0281

Aydin, A. E., & Selcuk, E. A. (2019). An investigation of financial literacy, money ethics and time preferences among college students: A structural equation model. *International Journal of Bank Marketing*, *37*(3), 880-900. https://doi.org/10.1108/IJBM-05-2018-0120

Bang, H. P. (2018). The American dream: who else but the young can revive it? *Policy Studies*, *39*(3), 274-291.

Bayley, S. (2017, March 11). Paradise lost: How art chronicled the birth–and death–of the American dream. Spectator, *333*(9837), 42. https://link.gale.com/apps/doc/A498485933/PPBE?u=scccld_main&sid=PPBE&xid=8dfae326

Beck, J. J., & Garris, R. O. (2019). Managing personal financial literacy in the United States: A case study. *Education Sciences*, *9*(2), 129. https://doi.org/10.3390/educsci9020129

Bellofatto, A., D'Hondt, C., & De Winne, R. (2018). Subjective financial literacy and retail investors' behavior. *Journal of Banking & Finance*, *92*, 168-181. https://doi.org/10.1016/j.jbankfin.2018.05.004

Berman, J. (2015). Only five states require high school students to take a class about money. https://www.marketwatch.com/story/teaching-about-money-does-your-state-make-the-grade-2015-10-20

Bernz, J. P. (2020, April 28). *9 reasons why you're in debt: It starts with your behavior*. Moneylogue. https://www.moneylogue.com/getting-out-of-debt-challenge-managing-behavior/

Bien, M., Knight, J., Levene, T., & Glasgow, F. (2021). *Personal finance and investing all-in-one for dummies*. Chichester: John Wiley.

Bowman, J. (2017, October 20). Got finance? State legislation pocket guide. https://docs.google.com/document/d/1jWRvoUU9ixpAZZpqbX0RiJ0PcO7sZCM4vszb3PEeESY/edit

Brannen, J. (2017). Combining qualitative and quantitative approaches: An overview. *Mixing Methods: qualitative and quantitative research*, 3-37. https://doi.org/10.4324/9781315248813-1

Brinkley-Badgett, C. (2017). Why your credit score will be even more important in 2018. *Nav*. www.nav.com

Callaghan, G. S., Fribbance, I., Higginson, M., & Open University. (2020). *Personal finance*. Basingstoke: Palgrave Macmillan.

Callahan, D. (2019). Ethical considerations. *Basic Benefits and Clinical Guidelines*, 33-44. https://doi.org/10.4324/9780429037726-4

Conner, M. (2020). Theory of planned behavior. In Tenenbaum, G. & Eklund, R., *Handbook of sport psychology*, (4th ed.; pp. 1-18). John Wiley & Sons.

Cordero, J. M., Gil-Izquierdo, M., & Pedraja-Chaparro, F. (2020). Financial education and student financial literacy: A cross-country analysis using PISA 2012 data. *The Social Science Journal*, 1-19. https://doi.org/10.1016/j.soscij.2019.07.011

Coskuner-Balli, G. (2020). Citizen-consumers wanted: Revitalizing the American dream in the face of economic recessions, 1981–2012. *Journal of Consumer Research*, *47*(3), 327-349. https://doi.org/10.1093/jcr/ucz059

Council of Graduate School. (2014). Addressing student debt crisis, new web tool helps students better plan their financial futures. http://www.cgsnet.org/sites/default/files/CGS_GradSense_Release_Final.pdf

Cutumisu, M., & Schwartz, D. L. (2018). The impact of critical feedback choice on students' revision, performance, learning, and memory. *Computers in Human Behavior, 78,* 351-367. https://doi.org/10.1016/j.chb.2017.06.029

Deenanath, V., Danes, S. M., & Jang, J. (2019). Purposive and unintentional family financial socialization, subjective financial knowledge, and financial behavior of high school students. *Journal of Financial Counseling and Planning*, *30*(1), 83-96. 10.1891/1052-3073.30.1.83

Detweiler, G. (2018). What is a good credit score? *Credit.com* https://www.credit.com/credit-scores/what-is-a-good-credit-score/

Elliott, L. (2016, February 14). Each generation should be better off than their parents? Think again. https://www.theguardian.com/business/2016/feb/14/economics-viewpoint-baby-boomers-generation-x-generation-rent-gig-economy

Ergün, K. (2018). Financial literacy among university students: A study in eight European countries. *International Journal of Consumer Studies*, *42*(1), 2-15. https://doi.org/10.1111/ijcs.12408

Ethical considerations. (2019). *Designing and Managing a Research Project: A Business Student's Guide,* 85-110. https://doi.org/10.4135/9781544316499.n5

Ethical theories, principles and guidelines. (n.d.). *Ethics and Education Research*, 18-43. https://doi.org/10.4135/9781473909762.n2

Fan, L., & Chatterjee, S. (2019). Financial socialization, financial education, and student loan debt. *Journal of Family and Economic Issues*, *40*(1), 74-85. https://doi.org/10.1007/s10834-018-9589-0

Farrington, R. (2014). The financial literacy gap cost college graduates thousands. http//www.forbes.com sites/robertfarringtion/2017/07/16the-finanial-gap-costs-college-graduates-thousands/2/#bella4929e4

Frazier, L. (2019). New Jersey requires financial literacy courses in middle schools, why mores states should do the same. *Forbes*. https://www.forbes.com/sites/Lizfrazierpeck/2019/01/08/new-jersey-requires-financial-literacy-courses-in-middle-schools-why more-states-should-do-the-same

Friedman, Z. (2019, January 11). 78% of workers live paycheck to paycheck. *Forbes*. https://www.forbes.com/sites/zackfriedman/2019/01/11/live-paycheck-to-paycheck-government-shutdown/?sh=55ebdef24f10vior%2F

Gantosis, J. (2019). How paying credit cards works: Understanding your credit card statements. https://www.creditcardinsider.com/learn/how-paying-a-credit-card-works/

Garg, N., & Singh, S. (2018). Financial literacy among youth. *International Journal of social economics*, *45*(1), 173-186. https://doi.org/10.1108/IJSE-11-2016-0303

Garrett, S. (2019). *Personal finance workbook for dummies*. Hoboken, N.J: Wiley.

Grant, K. (2018). Identity theft isn’t just an adult problem. Kids are victims, too. *CNBC*. https://www.cnbc.com/2018/04/24/child-identity-theft-is-a-growing-and-expersive-problem.html

Halcomb, E. (2018). Combining quantitative and qualitative methods. *How to Do Primary Care Research*, 39-45. https://doi.org/10.1201/9781351014519-5

Hamid, F. S., & Loke, Y. J. (2021). Financial literacy, money management skills, and credit card repayments. *International Journal of Consumer Studies*, *45*(2), 235-247. https://doi.org/10.1111/ijcs.12614

Hancock, A. M., Jorgensen, B. L., & Swanson, M. S. (2013). College students and credit card use: The role of parents, work experience, financial knowledge, and credit card attitudes. *Journal of family and economic issues*, *34*(4), 369-381.

Harrison, T. (2019). *Financial literacy and the limits of financial decision-making*. Palgrave-Macmillan

Harvey, M. (2019). Impact of financial education mandates on younger consumers' use of alternative financial services. *Journal of Consumer Affairs*, *53*(3), 731-769. https://doi.org/10.1111/joca.12242

Henegar, J. M., Archuleta, K. L., Grable, J., Britt, S. L., Anderson, N., & Dale, A. (2013). Credit card behavior as a function of impulsivity and mother’s socialization factors. *Journal of Financial Counseling and Planning*, *24*(2), 37-49.

Ho, D. T. K., & Intai, R. (2018). Effectiveness of audio-visual aids in teaching lower secondary science in a rural secondary school. *Asia Pacific Journal of Educators and Education*, *32*, 91-106. https://doi.org/10.21315/apjee2017.32.7

Hütten, M., Maman, D., Rosenhek, Z., & Thiemann, M. (2018). Critical financial literacy: an agenda. *International Journal of Pluralism and Economics Education*, *9*(3), 274-291. https://doi.org/10.1504/IJPEE.2018.093405

Information Resources Management Association. (2021). *Research anthology on personal finance and improving financial literacy*.

Irby, L. (2020, July 31). Decoding your credit card billing statement. https://www.thebalance.com/how-to-understand-your-credit-card-billing-statement-960246

Iwaki, N., Nara, T., & Tanaka, S. (2017). Does delayed corrective feedback enhance the acquisition of correct information? *Acta Psychologica*, *181*, 75-81. https://doi.org/10.1016/j.actpsy.2017.10.005

Johansson, A. (2018, January 17). Is your credit score affecting your quality of life? https://www.nbcnews.com/better/business/your-credit-score-affecting-your-quality-life-ncna836956

Johnson, J., Spraggon, D., Stevenson, G., Levine, E., & Mancari, G. (2021). Impact of the future smart online financial education course on financial knowledge of middle school students. *Journal of Financial Counseling and Planning*. https://doi.org/10.1891/JFCP-19-00061

Kaufman, R. (2018). The history of the fico score. https://www.myfico.com/credit-education/blog/history-of-the-fico-score

Kiger, P. (2017, April 18). Boomers prefer to pay in cash, not credit or debit card. https://www.aarp.org/money/credit-loans-debt/info-2017/boomers-prefer-cash-over-credit-fd.html

Kim, K. T., & Lee, J. (2018). Financial literacy and use of payday loans in the United States. *Applied Economics Letters*, *25*(11), 781-784. https://doi.org/10.1080/13504851.2017.1366635

Kim, K. T., Lee, J., & Hanna, S. D. (2020). The effects of financial literacy overconfidence on the mortgage delinquency of U.S. households. *Journal of Consumer Affairs, 54*(2), 517-540. https://doi.org/10.1111/joca.12287

Kuchler, T., & Pagel, M. (2021). Sticking to your plan: The role of present bias for credit card paydown. *Journal of Financial Economics*, *139*(2), 359-388.

Kuntze, R., Wu, C. K., Wooldridge, B. R., & Whang, Y. O. (2019). Improving financial literacy in the college of business students: Modernizing delivery tools. *International Journal of Bank Marketing*, *37*(4), 976-990. https://doi.org/10.1108/IJBM-03-2018-0080

Lambert, R. (2021). *Financial literacy for managers: Finance and accounting for better decision-making*. [Wharton Executive Essentials.]. https://www.amazon.com/Financial-Literacy-Managers-Accounting-Decision-Making/dp/1613630182?asin=1613630182&revisionId=&format=4&depth=1

Limbu, Y. B., & Sato, S. (2019). Credit card literacy and financial well-being of college students. *International Journal of Bank Marketing*, *37*(4), 991-1003. https://doi.org/10.1108/IJBM-04-2018-0082

Lin, C., Hsiao, Y. J., & Yeh, C. Y. (2017). Financial literacy, financial advisors, and information sources on demand for life insurance. *Pacific-Basin Finance Journal*, *43*, 218-237. https://doi.org/10.1016/j.pacfin.2017.04.002

Lostutter, T. W., Enkema, M., Schwebel, F., Cronce, J. M., Garberson, L. A., Ou, B., . . . & Larimer, M. E. (2019). Doing it for the money: The relationship between gambling and money attitudes among college students. *Journal of gambling studies*, *35*(1), 143-153. https://doi.org/10.1007/s10899-018-9789-4

Lührmann, M., Serra-Garcia, M., & Winter, J. (2015). Teaching teenagers in finance: does it work? *Journal of Banking & Finance*, *54*, 160-174.

Lusardi, A. (2015). Financial literacy: Do people know the ABCs of finance? *Public understanding of science*, *24*(3), 260-271.

Lusardi, A. (2019). Financial literacy and the need for financial education: Evidence and implications. *Swiss Journal of Economics and Statistics*, *155*(1), 1-8. https://doi.org/10.1186/s41937-019-0027-5

Madden, T. J., Ellen, P. S., & Ajzen, I. (1992). A comparison of the theory of planned behavior and the theory of reasoned action. *Personality and social psychology Bulletin*, *18*(1), 3-9.

McKillip, R., Ernst, M., Ahn, J., Tekian, A., & Shappell, E. (2018). Toward a resident personal finance curriculum: quantifying resident financial circumstances, needs, and interests. *Cureus*, *10*(4). https://doi.org/10.7759/cureus.2540

Montalto, C. P., Phillips, E. L., McDaniel, A., & Baker, A. R. (2019). College student financial wellness: Student loans and beyond. *Journal of Family and Economic Issues*, *40*(1), 3-21. https://doi.org/10.1007/s10834-018-9593-4

Morad, R. (2017, December 31). Some states fall short when educating high school students about personal finance. *Forbes*. https://www.forbes.com/sites/reneemorad/2017/12/31/some-states-fall-short-when-high-school-students-about-personal-finance/?sh=7c0002174fd0https%3A%2F%2Fwww.lendingpoint.com%2Fblo g%2Fmissouri-gets-top-marks-for-high-school-financial-literacy-education%2F

Moreland, K. A. (2018). Seeking financial advice and other desirable financial behaviors. *Journal of Financial Counseling and Planning*, *29*(2), 198-207. https://doi.org/10.1891/1052-3073.29.2.198

Moreno-Herrero, D., Salas-Velasco, M., & Sánchez-Campillo, J. (2018). The knowledge and skills that are essential to make financial decisions: First results from PISA 2012. *FinanzArchiv: Public Finance Analysis*, *74*(3), 293-339. 10.1628/fa-2018-0009

Mouna, A., & Anis, J. (2017). Financial literacy in Tunisia: Its determinants and its implications on investment behavior. *Research in International Business and Finance*, *39*, 568-577. https://doi.org/10.1016/j.ribaf.2016.09.018

Mudzingiri, C., Mwamba, J. W. M., & Keyser, J. N. (2018). Financial behavior, confidence, risk preferences, and financial literacy of university students. *Cogent Economics & Finance*, *6*(1), 1512366. https://doi.org/10.1080/23322039.2018.1512366

Nejad, M. G., & Javid, K. (2018). Subjective and objective financial literacy, opinion leadership, and the use of retail banking services. *International Journal of Bank Marketing*, *4*(36), 784-804. https://doi.org/10.1108/IJBM-07-2017-0153

Norvilitis, J., & Mendes-Da-Silva, W. (2013). Attitudes toward credit and finances among college students in Brazil and the United States. *Journal of Business Theory and Practice*, *1*(1), 132-151.

Opletalová, A. (2015). Financial education and financial literacy in the Czech education system. *Procedia-Social and Behavioral Sciences*, *171*, 1176-1184.

Ozkale, A., & Ozdemir Erdogan, E. (2020). An analysis of the interaction between mathematical literacy and financial literacy in PISA. *International Journal of Mathematical Education in Science and Technology*, 1-21. https://doi.org/10.1080/0020739X.2020.1842526

Pak, T. Y. (2018). Financial literacy and high-cost borrowing: Exploring the mechanism. *International Journal of Consumer Studies*, *42*(3), 283-294. https://doi.org/10.1111/ijcs.12429

Pandey, A., Ashta, A., Spiegelman, E., & Sutan, A. (2020). Catch them young: Impact of financial socialization, financial literacy, and attitude towards money on the financial well-being of young adults. *International Journal of Consumer Studies*, *44*(6), 531-541. https://doi.org/10.1111/ijcs.12583

Paul, S. (2018). Americans are clueless when it comes to personal finance. *N.Y. Post.* https://nypost.com/2018/01/18/americans-are-clueless-when-it-comes-to-personal-finance/

Pesce, N., (2020). A shocking number of Americans are living paycheck to paycheck. https://www.marketwatch.com/story/a-shocking-number-of-americans-are-living-paycheck-to-paycheck-2020-01-17

Philippas, N. D., & Avdoulas, C. (2020). Financial literacy and financial well-being among generation-Z university students: Evidence from Greece. *The European Journal of Finance*, *26*(4-5), 360-381. https://doi.org/10.1080/1351847X.2019.1701512

Polonsky, M., & Waller, D. (2019). Designing and managing a Research Project: A Business Student's guide. https://doi.org/10.4135/9781544316499

Potrich, A. C. G., & Vieira, K. M. (2018). Demystifying financial literacy: A behavioral perspective analysis. *Management Research Review*, *41*(9), 1047-1068. https://doi.org/10.1108/MRR-08-2017-0263

Pozgar, G. D. (2019). *Legal and ethical issues for health professionals*. Jones & Bartlett Learning.

Rai, K., Dua, S., & Yadav, M. (2019). Association of financial attitude, financial behavior and financial knowledge towards financial literacy: A structural equation modeling approach. *FIIB Business Review*, *8*(1), 51-60. https://doi.org/10.1177/2319714519826651

Ramsey, D. (2019). *The total money makeover: A proven plan for financial fitness*. Nashville, TN: Thomas Nelson Pub.

Raut, R. K. (2020). Past behavior, financial literacy, and investment decision-making process of individual investors. *International Journal of Emerging Markets, 15*(6), 1243-1263. https://doi.org/10.1108/IJOEM-07-2018-0379

Riitsalu, L., & Murakas, R. (2019). Subjective financial knowledge, prudent behavior, and income. *International Journal of Bank Marketing*, *37*(4), 934-950. https://doi.org/10.1108/IJBM-03-2018-0071

Rui, Q. (2008, January 22). President's advisory council on financial literacy 2008 annual report to the president. https://www.academia.edu/6708140/Presidents_Advisory_Council_on_Financial_Literacy_2008_Annual_Report_to_the_President

Rutberg, S., & Bouikidis, C. D. (2018). Focusing on the fundamentals: A simplistic differentiation between qualitative and quantitative research. *Nephrology Nursing Journal*, *45*(2), 209-213.

Sadiq, M. N., & Khan, R. A. A. (2019). Impact of personality traits on investment intention: the mediating role of risk behavior and the moderating role of financial literacy. *Journal of Finance and Economics Research*, *4*(1), 1-18. 10.20547/jfer1904101

Saeedi, A., & Hamedi, M. (2018). *Financial literacy: Empowerment in the stock market*.

Sahadeo, C. (2018). *Financial literacy and money script.* Springer International Publishing AG. https://link.springer.com/book/10.1007/978-3-319-77075-8?gclid=EAIaIQobChMIpdPWsunI9QIVhBXUAR3qqwHkEAQYASABEgJaW_D_BwE

Salinas Jr, C., & Hidrowoh, J. R. (2018). Promoting financial literacy and Latino males' success at community colleges. *Community College Journal of Research and Practice*, *42*(5), 330-339. https://doi.org/10.1080/10668926.2017.1301276

Sälzer, C., & Roczen, N. (2018). Assessing global competence in PISA 2018: Challenges and approaches to capturing a complex construct. *International Journal of Development Education and Global Learning*, *10*(1), 5-20. 10.18546/IJDEGL.10.1.02

Santini, F. D. O., Ladeira, W. J., Mette, F. M. B., & Ponchio, M. C. (2019). The antecedents and consequences of financial literacy: A meta-analysis. *International Journal of Bank Marketing, 37*(6), 1462-1479. https://doi.org/10.1108/IJBM-10-2018-0281

Saurabh, K., & Nandan, T. (2018). Role of financial risk attitude and financial behavior as mediators in financial satisfaction: Empirical evidence from

India. *South Asian Journal of Business Studies, 7*(2), 207-224. https://doi.org/10.1108/SAJBS-07-2017-0088

Schneider, S., Nebel, S., Beege, M., & Rey, G. D. (2020). The retrieval-enhancing effects of decorative pictures as memory cues in multimedia learning videos and subsequent performance tests. *Journal of Educational Psychology*, *112*(6), 1111. https://doi.org/10.1037/edu0000432

Setiyani, R., & Solichatun, I. (2019). Financial well-being of college students: An empirical study on mediation effect of financial behavior. *KnE Social Sciences*, 451-474. https://doi.org/10.18502/kss.v3i11.4026

Shahrabani, S. (2012). The effect of financial literacy and emotions on intent to control personal budget: A study among Israeli college students. *International Journal of Economics and Finance*, *4*(9), 156-163.

Sharif, S. P., Ahadzadeh, A. S., & Turner, J. J. (2020). Gender differences in financial literacy and financial behavior among young adults: The role of parents and information seeking. *Journal of Family and Economic Issues*, *41*(4), 672-690. https://doi.org/10.1007/s10834-020-09674-z

Sharif, S. P., & Naghavi, N. (2020). Family financial socialization, financial information seeking behavior and financial literacy among youth. *Asia-Pacific Journal of Business Administration*. https://www.manaraa.com/books/Family%20financial%20socialization%20financial%20information%20seeking%20behavior%20and%20financial%20literacy%20among%20youth.pdf

She, H. C., Stacey, K., & Schmidt, W. H. (2018). Science and mathematics literacy: PISA for better school education. *International Journal of Science and*

Mathematics Education, *16*(1), 1-5. https://doi.org/10.1007/s10763-018-9911-1

Silva, T. P. D., Magro, C. B. D., Gorla, M. C., & Nakamura, W. T. (2017). Financial education level of high school students and its economic reflections. *Revista de Administração (São Paulo)*, *52*(3), 285-303. https://doi.org/10.1016/j.rausp.2016.12.010

Skagerlund, K., Lind, T., Strömbäck, C., Tinghög, G., & Västfjäll, D. (2018). Financial literacy and the role of numeracy–How individuals' attitude and affinity with numbers influence financial literacy. *Journal of Behavioral and Experimental Economics*, *74*, 18-25. https://doi.org/10.1016/j.socec.2018.03.004

Speer, A. B., Tenbrink, A. P., Schwendeman, M. G., & Wegmeyer, L. J. (2020). Individual differences in effective interview design: Factors affecting question choice. *International Journal of Selection and Assessment*, *28*(3), 310-321.

Stoddard, C., & Urban, C. (2020). The effects of state-mandated financial education on college financing behaviors. *Journal of Money, Credit and Banking*, *52*(4), 747-776. https://doi.org/10.1111/jmcb.12624

Stolper, O. A., & Walter, A. (2017). Financial literacy, financial advice, and financial behavior. *Journal of Business Economics*, *87*(5), 581-643. https://doi.org/10.1007/s11573-017-0853-9

Suetomi, K. (2014). Reform of the educational finance system as the foundation of compulsory education. *Educational Studies in Japan*, *8*, 143-158.

Susan, M., & Djajadikerta, H. (2017). Understanding financial knowledge, financial attitude, and financial behavior of college students in Indonesia. *Advanced Science Letters*, *23*(9), 8762-8765. https://doi.org/10.1166/asl.2017.9966

Taillard, M. (2020). *Personal finance: A practical guide* (7th edition). Pearson.

Thomas, B., & Subhashree, P. (2020). Factors that influence the financial literacy among engineering students. *Procedia Computer Science*, *172,* 480-487. https://doi.org/10.1016/j.procs.2020.05.161

Tuggle, K. (2012). Teaching gap: 83% of teens don't know how to manage money. http://www.forx business.com/features/2012/07/17/teaching-gap-83%-teens-don't-know-how-to-manage-money.print html.

Tycho Press (Firm). (2021). *Personal finance simplified: The step-by-step guide for smart money management*. Berkely, CA: Tycho Press.

Tycho Press. (2019). *Personal finance simplified: The step-by-step guide for smart money management*. Berkely, CA: Tycho Press.

Tyson, E. (2019). *Personal finance*. https://www.amazon.com/Personal-Finance-Dummies-Eric-Tyson/dp/1119517893?asin=1119517893&revisionId=&format=4&depth=1

Urban, C., Schmeiser, M., Collins, J. M., & Brown, A. (2018). The effects of high school personal financial education policies on financial behavior. *Economics of Education Review*, 101786. https://doi.org/10.1016/j.econedurev.2018.03.006

Vanichvasin, P. (2021). Effects of visual communication on memory enhancement of Thai undergraduate students, Kasetsart University. *Higher Education*, *11*(1). https://doi.org/10.5539/hes.v11n1p34

Vieira, K. M., Potrich, A. C. G., & Mendes-Da-Silva, W. (2019). A financial literacy model for university students. *In Individual Behaviors and Technologies for Financial Innovations* (pp. 69-95). Springer, Cham. https://doi.org/10.1007/978-3-319-91911-9_4

Wang, J., & Antonenko, P. D. (2017). Instructor presence in the instructional video: Effects on visual attention, recall, and perceived learning. *Computers in Human Behavior*, *71*, 79-89. https://doi.org/10.1016/j.chb.2017.01.049

What is financial literacy - Your life your money. (2009). https://www.pbs.org/your-life-your-money/more/what_is_financial_literacy.php

Widyastuti, U., Sumiati, A., Herlitah, H., & Melati, I. (2020). Financial education, financial literacy, and financial Behaviour: What does really matter?. *Management Science Letters*, *10*(12), 2715-2720. https://doi.org/10.5267/j.msl.2020.4.039

Xiao, J. J., Tang, C., Serido, J., & Shim, S. (2011). Antecedents and consequences of risky credit behavior among college students: Application and extension of the theory of planned behavior. *Journal of Public Policy & Marketing*, *30*(2), 239-245.

Zokaityte, A. (2019). *Financial literacy education: Edu-regulating our saving and spending habits*. Palgrave-Macmillan.

Appendix A

Letter of Permission for Students

Dear Participants:

My name is Betty Fagan, and I am a doctoral student with Lindenwood University. I am inviting you to participate in my study titled: Is there a correlation between students that passed personal finance class and credit scores?

I am currently enrolled in the doctoral program at Lindenwood University and conducting my research, as supported by my Chair Dr. Robert Steffes. The participants include student who have graduated (2015 to present). You will be emailed a 20-question survey (10 minutes), all accessible via a web link. The survey will ask you what information in personal-finance class helped you with your finances, how long of a term should the class be taught, and what themes in the personal-finance class helped you the most.

Your alternative to participating in this study is NOT to participate. There are no negative consequences if you choose to not complete the survey. If you choose to take the survey, you can refuse to answer any questions you do not want to answer and still remain in the study. Your decision whether or not to participate will not adversely affect your relationship with Lindenwood University.

Please submit your credit score from Transunion, Equifax, Credit Karma, or Experian and a report card. **Please do not submit any identifying information.** This information is needed to make the correlation between grades in school and your credit report.

It should be noted that your confidentiality will be secured by the research. All responses on the survey will remain anonymous with no identifying information requested. After completing the survey, you will have the option of entering a raffle for a chance to win one of four American Express gift cards in the amount of $50.00. to be included in the raffle, you will be asked for an e-mail address, which will be used to notify you if you have won a prize. Raffle winners will be contacted by Chair Dr. Robert Steffes, The winner of the gift card will be notified by Chair Dr. Robert Steffes and the recipient will be unknown by the researcher.

If you would like to participate in an interview, please indicate your willingness at the end of the survey by providing your phone number or calling the researcher at 636-698-4904. After completing the interview, you will have the option of entering a raffle for a chance to win one of four 25.00 Panera Bread gift cards. You will be asked for an e-mail address, which will be used to notify you if you have won a prize. Raffle winners will be contacted by Chair Dr. Robert Steffes, The winner of the gift card will be notified by Chair Dr. Robert Steffes and the recipient will be unknown by the researcher.

Your completion of the assessments serves as your consent to participate in the study, which you may stop at any time.

Thank you for taking time to participate in my research, should you want a copy of the results of this survey you may email bwb414@lionmail.lindenwood.edu.

Appendix B

Student Survey Questions

Q1 The personal-finance course should be taught over a single semester.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q2 The personal-finance course should be taught for an entire year.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q3 Content mastery of personal-finance is greater when taught over one semester.

- Strongly agree 1 (1)
- Somewhat agree 2 (2)
- Neither agree nor disagree 3 (3)
- Somewhat disagree 4 (4)
- Strongly disagree 5 (5)

Q4 Content mastery of personal-finance is greater when taught over a year.

- Strongly agree 1 (1)
- Somewhat agree 2 (2)
- Neither agree nor disagree 3 (3)
- Somewhat disagree 4 (4)
- Strongly disagree 5 (5)

Q5 The grade obtained in personal-finance course in high school impacts financial literacy.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q6 The personal-finance course should be taught at the high school level.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q7 Personal-finance would be more relevant if taught at the college level.

- ◯ Strongly agree 1 (1)
- ◯ Somewhat agree 2 (2)
- ◯ Neither agree nor disagree 3 (3)
- ◯ Somewhat disagree 4 (4)
- ◯ Strongly disagree 5 (5)

Q8 There should be a personal-finance exam upon completion of high school.

- ◯ Strongly agree 1 (1)
- ◯ Somewhat agree 2 (2)
- ◯ Neither agree nor disagree 3 (3)
- ◯ Somewhat disagree 4 (4)
- ◯ Strongly disagree 5 (5)

Q9 There should be a personal-finance exam upon completion of the course at the collegiate level.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q10 Theme 1: Goals and Decision provided key information that helped me after graduating from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q11 Theme 2: Careers and Planning provided key information that helped me after graduating from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q12 Theme 3: Budgeting provided key information that helped me after graduating from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q13 Theme 4: Banking Services provided key information that helped me after graduating from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q14 Theme 5: Saving Investing provided key information that helped me after graduating from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q15 Theme 6: Credit provided key information that helped me after graduation from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q16 Theme 7: Consumer Skills provided key information that helped me after graduation from high school.

- ○ Strongly agree 1 (1)
- ○ Somewhat agree 2 (2)
- ○ Neither agree nor disagree 3 (3)
- ○ Somewhat disagree 4 (4)
- ○ Strongly disagree 5 (5)

Q17 The information on income provided me key information that helped me after graduation from high school.

- Strongly agree 1 (1)
- Somewhat agree 2 (2)
- Neither agree nor disagree 3 (3)
- Somewhat disagree 4 (4)
- Strongly disagree 5 (5)

Q18 The information on money management provided me key information that helped me after graduation from high school.

- Strongly agree 1 (1)
- Somewhat agree 2 (2)
- Neither agree nor disagree 3 (3)
- Somewhat disagree 4 (4)
- Strongly disagree 5 (5)

Q19 The information on spending and credit provided me key information that helped me after graduation from high school.

- ◯ Strongly agree 1 (1)
- ◯ Somewhat agree 2 (2)
- ◯ Neither agree nor disagree 3 (3)
- ◯ Somewhat disagree 4 (4)
- ◯ Strongly disagree 5 (5)

Q20 The information on saving and investing provided me key information that helped me after graduation from high school.

- ◯ Strongly agree 1 (1)
- ◯ Somewhat agree 2 (2)
- ◯ Neither agree nor disagree 3 (3)
- ◯ Somewhat disagree 4 (4)
- ◯ Strongly disagree 5 (5)

Q21 Would you be willing to participate in a follow-up interview?

- ○ Yes. Please provide email or telephone number. (1)
- ○ No. (2)

Q22 Enter your email or phone number.

____

Q23 Please check this box if you agree to participate in this survey and consent to the use of your responses in the data analysis phase of the research project.

Appendix C

Student Interview Questions

1.What information did you retain from taking personal finance?

2. What course did you take to receive personal finance credit?

3. Should personal finance be taught at the high school or collegiate level or both? And why?

4. After graduating from high school or college, from whom have you sought financial advice?

5.Explain the top three areas in which you feel you need the most help pertaining to your financial resource and information needs?

6. How often do you check your credit score?

7. What topics would you suggest the teacher spend more time?

8. Are there any questions or concerns that I did not ask that you would like to discuss?

Appendix D

Personal Finance Teacher Permission Letter

Dear Personal-Finance Teachers:

My name is Betty Fagan and I am a doctoral student with Lindenwood University. I am conducting a research project under the supervision of my Chair Dr. Robert Steffes. I am inviting you to participate in my study titled: Is there a correlation between students that passed personal finance class and credit scores?

The participants include student who have graduated (2015 to present) and teachers responsible for teaching personal finance. You will be emailed a 21 questions survey (10 minutes), all accessible via a web link. The survey will ask you what area(s) or themes you would reteach, should personal-finance be taught at the high school level or the collegiate level, and should personal-finance be taught as a semester or year-long course.

Your alternative to participating in this study is NOT to participate. There are no negative consequences if you choose to not complete the survey. If you choose to take the survey, you can refuse to answer any questions you do not want to answer and still remain in the study. Your decision whether or not to participate will not adversely affect your relationship with Lindenwood University.

Please do not submit any identifying information. This information is needed to make the correlation between grades in school and credit report.

It should be noted that your confidentiality will be secured by the research. All responses on the survey will remain anonymous with no identifying information requested. After completing the survey, you will have the option of entering a raffle for a chance to win one of four American Express gift cards in the amount of $50.00. To be included in the raffle, you will be asked for an e-mail address, which will be used to notify you if you have won a prize. Raffle winners will be contacted by Chair Dr. Robert Steffes, The winner of the gift card will be notified by Chair Dr. Robert Steffes and the recipient will be unknown by the researcher.

If you would like to participate in an interview, please indicate your willingness at the end of the survey by providing your phone number or calling the or calling the researcher at 636-698-4904. After completing the interview, you will have the option of entering a raffle for a chance to win one of four 25.00 Panera Bread gift cards. You will be asked for an e-mail address, which will be used to notify you if you have won a prize. Raffle winners will be contacted by Chair Dr. Robert Steffes, The winner of the gift card will be notified by Chair Dr. Robert Steffes and the recipient will be unknown by the researcher.

Your completion of the assessments serves as your consent to participate in the study, which you may stop at any time. Thank you for taking time to participate in my research, should you want a copy of the results of the survey you may email bwb414@lionmail.lindenwood.edu.

Appendix E

Personal Finance Teacher Survey

Q1 Should personal finance course be taught over a single semester?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q2 Should personal finance course be taught over an entire year?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q3 Content mastery of personal finance is greater when taught over one semester?

- Definitely yes (4)
- Probably yes (5)
- Might or might not (6)
- Probably not (7)
- Definitely not (8)

Q4 Content mastery of personal finance is greater when taught over a year?

- Definitely yes (1)
- Probably yes (2)
- Might or might not (3)
- Probably not (4)
- Definitely not (5)

Q5 The grades obtained in personal-finance course in high school impacts financial literacy?

- Definitely yes (6)
- Probably yes (7)
- Might or might not (8)
- Probably not (9)
- Definitely not (10)

Q6 Personal finance should be taught at the high school level?

- Definitely yes (1)
- Probably yes (2)
- Might or might not (3)
- Probably not (4)
- Definitely not (5)

Q7 Personal finance would be more relevant if taught at the collegiate level?

- Definitely yes (4)
- Probably yes (5)
- Might or might not (6)
- Probably not (7)
- Definitely not (8)

Q8 Should there be a personal-finance exam upon completion of high school?

- Definitely yes (1)
- Probably yes (2)
- Might or might not (3)
- Probably not (4)
- Definitely not (5)

Q9 Should there be a personal-finance exam at the collegiate level?

- ◯ Definitely yes (1)
- ◯ Probably yes (2)
- ◯ Might or might not (3)
- ◯ Probably not (4)
- ◯ Definitely not (5)

Q10 Theme 1: Goals and Decision making provided key information to students?

- ◯ Definitely yes (4)
- ◯ Probably yes (5)
- ◯ Might or might not (6)
- ◯ Probably not (7)
- ◯ Definitely not (8)

11 Theme 2: Careers and Planning provided key information to students?

- ◯ Definitely yes (4)
- ◯ Probably yes (5)
- ◯ Might or might not (6)
- ◯ Probably not (7)
- ◯ Definitely not (8)

Q12 Theme 3: Budgeting provided key information to students?

- ○ Definitely yes (4)
- ○ Probably yes (5)
- ○ Might or might not (6)
- ○ Probably not (7)
- ○ Definitely not (8)

13 Theme 4: Banking services provided key information to students?

- ○ Definitely yes (4)
- ○ Probably yes (5)
- ○ Might or might not (6)
- ○ Probably not (7)
- ○ Definitely not (8)

Q15 Theme 5: Saving and investing provided key information to students?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q16 Theme 6: Credit provide key information to students?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q17 Theme 7: Consumer skills provided key information to students?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q18 Does the grade obtained in personal-finance in high school impact financial literacy?

- ○ Definitely yes (1)
- ○ Probably yes (2)
- ○ Might or might not (3)
- ○ Probably not (4)
- ○ Definitely not (5)

Q19 What area(s) of personal-finance literacy would you reteach or spend more time teaching? And why?

____

Q20 What course evaluation was given upon completion of the personal-finance course?

____

Q21 Provide the name of the course completed to fulfil the personal-finance requirement,

____

Q22 I am willing to participate in the survey.

○ Definitely yes (1)

○ Definitely no (2)

Q23 Please provide email address or phone number.

____

Appendix F

Personal Finance Teacher Interview Questions

- 1. Which course did students complete to fulfil the personal finance credit?
- 2.What type of course evaluation was given to students at the end of the course?
- 3. What information was obtained from the end of course evaluation and how did it impact your teaching, if any?
- 4.Explain the top three areas in which you feel students need the most?
- 5. How often do you check your credit score?
- 6. Which topic(s)) would you spend more time teaching? And why?
- 7. Are there any questions or concerns that I did not ask that you would like to discuss?