UNIVERSITY OF CAPE COAST

THE IMPACT OF FINANCIAL EDUCATION ON FINANCIAL LITERACY AND SPENDING HABITS OF SHS BUSINSS AND NON-BUSINESS STUDENTS IN TAKORADI

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BY

BRIDGIT OHENEWAA AGYEKUM

A dissertation submitted to the Department of Business Programmes of the College of Distance Education, University of Cape Coast in partial fulfillment of the requirement for the award of Master of Business Administration degree in Finance

MARCH 2024

DECLARATION

Students' Declaration

I declare that this dissertation, with the exception of quotations and references contained in published works which has been identified and duly acknowledged is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature:……………………………… Date:…………………………

Name: Bridgit Ohenewaa Agyekum

Supervisor's Declaration

I hereby declare that the preparation and presentation of this dissertation was supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Signature:…………………………………

Date:………………………… Name: Prof. Siaw Frimpong

ABSTRACT

The purpose of the study is to examine the impact of financial education on financial literacy and spending habit of SHS Business and non-business students in Takoradi. In assessing this objective, literature was reviewed on concepts, theories and empirical studies. Theory of planned behaviour and social cognitive theory were used as the theoretical base for the study. Methodologically, the study used quantitative research approach and adopted experimental research design based on which data was collected from 267 business and non-business students from two selected SHS in Takoradi. The participants were selected using simple random sampling and purposive sampling. Structured questionnaire was mainly used to collect primary data on participants making the source of data for the study primary. descriptive specifically, frequencies, percentages, mean and standard deviations alongside regression analysis was computed to analyse the study objectives. Having analyse the study objectives, it was discovered that both business and non-business SHS students demonstrate understanding of financial concepts but struggle to translate knowledge into action, notably in retirement planning. Financial education does not significantly impact financial literacy or spending habits. There is no gender gap in financial knowledge, indicating equitable education. The study concludes that while SHS students in Takoradi display a strong grasp of financial concepts, there is a need for improvement in translating knowledge into practical habits, particularly in retirement planning. The lack of significant impact of financial education on literacy and spending suggests a reevaluation of programs to better equip students for financial success. Equitable opportunities across genders challenge stereotypes.

ACKNOWLEDGEMENTS

I would like to express my deepest gratitude to my supervisor, Prof. Siaw Frimpong, for his invaluable guidance, unwavering support, and scholarly insights throughout the entire process of this research. Prof. Siaw Frimpong has been a constant source of encouragement, challenging me to push the boundaries of my thinking and research methodologies.

To my loving family, your endless love, understanding, and patience sustained me during the highs and lows of this academic journey. Your belief in me never wavered, and I am profoundly grateful for your unwavering support. A heartfelt appreciation goes to my dear friends, whose words of encouragement and occasional study breaks brought balance to the intense work of researching and writing. Your friendship is treasured, and I am fortunate to have you in my life.

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DEDICATION

To my family and love ones, for their endless love and support.

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LISTS OF ABBREVIATIONS

FFFL	The Financial Fitness for Life
FINRA	Financial Industry Regulatory Authority
HSFPP	High School Financial Planning Program
INFE	International Network on Financial Education
LEI	Learning, Earning and Investing
MEA	Munich Center for the Economics of Aging
OECD	Organization for Economic Cooperation and Development
SHS	Senior High School
SPSS	Statistical Package for Social Sciences
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action

CHAPTER ONE

INTRODUCTION

Background to the Study

Understanding how to manage money is crucial for making wise financial choices throughout life. This skill, known as financial literacy, significantly impacts how individuals and families save money (Farinella, Bland & Franco, 2017). Financial literacy encompasses the ability to handle personal finances, make informed financial decisions, and grasp concepts such as debt management, budgeting, investing, and saving. Consequently, financial education plays a pivotal role in enhancing financial literacy by raising awareness of financial issues and guiding individuals to adjust their behaviors for improved financial decision-making for themselves and their families.

Regrettably, many young people do not receive adequate instruction on fundamental financial practices like budgeting and saving (Farinella et al., 2017). Studies indicate a concerning lack of financial education among youth and young adults (Lusardi, 2019). For instance, Ergün (2018) discovered that a group of high school students did not receive sufficient financial education. This deficiency in financial knowledge often leads to the early onset of excessive debt among young individuals.

Being knowledgeable about finances is essential for making wise decisions about money, both presently and in the future. Similar to basic skills like arithmetic, reading, and writing, financial literacy is increasingly recognized as a necessity for success in the complex realm of finance (Lusardi, 2019). Concerns about the financial education and literacy of citizens, particularly the youth, have grown in industrialized and developing nations over recent decades. Research indicates that financial illiteracy significantly contributes to the global decrease in savings rates and the rise in consumer debt due to the spending habits of individuals (Oseifuah et al., 2018). These behaviors can lead to various negative outcomes, such as poor mental well-being, insufficient retirement planning, the potential for divorce, and more (Seifuah et al., 2018). This could result in emotional stress, depression, and diminished self-esteem.

Recognizing these challenges, there is a growing understanding that increased financial education and literacy can lead to better financial decision-making. This realization is important not only for adults but also for the younger generation, which is expected to make up the majority of the workforce in the future. Therefore, starting financial education early is crucial for young individuals to begin their careers with the knowledge needed to make prudent financial choices that pave the way for financial success (Farinella et al., 2017). However, there is a lack of information available regarding the financial education, literacy levels, and the extent of money management training received by young adults.

Policymakers are increasingly recognizing the significance of young individuals gaining financial education and literacy skills (Lusardi, 2019). The current generation of youth will likely encounter more intricate financial decisions compared to previous generations due to the growing complexity of available financial products, services, and systems (Lusardi, 2019). Additionally, as adults, young people may face heightened financial risks because of factors such as longer life expectancies, reduced welfare and job benefits, and uncertain economic and career prospects (Lusardi, 2015). These socioeconomic differences highlight the potential for financial education to narrow the gap in financial literacy.

Research by Oseifuah et al. (2018) indicates a lack of consistent data in recent years regarding the level of financial literacy among young individuals, particularly college students in both developed and developing nations. Globally, adults generally demonstrate a low level of financial literacy based on extensive research assessing this skill. There is a logical inference that those with higher incomes are likely to possess greater financial literacy (Clark et al., 2017). Consequently, it stands to reason that individuals with lower incomes and educational backgrounds, often reflecting the lowest financial literacy scores, could benefit the most from financial education.

This study seeks to delve into an often overlooked region and corroborate existing data and models by examining the level of financial education and financial literacy among senior high school students, along with its impact on their saving behaviors. In Ghana, senior high school students typically do not receive instruction on basic personal finance concepts before graduation. The curriculum primarily focuses on preparing students for admission into postsecondary institutions, neglecting topics such as money management, investments, mutual funds, insurance, and taxes (Opoku, 2016). Given the ongoing turbulence in the global economy, it is crucial for younger generations to possess the necessary financial literacy to make sound financial choices. This research aims to shed light on the financial knowledge and behaviors of senior high school students in Ghana, an area that has not received adequate attention in previous studies.

Statement of the Problem

The significance of promoting financial literacy among high school students cannot be emphasized enough (Lusardi, 2019). Studies have indicated that many of these young individuals lack even the most basic understanding of concepts like inflation, interest rates, and risk diversification (Lusardi, 2019). Literature works have specifically highlighted the insufficient financial literacy levels among Ghanaians, particularly the youth (Oseifuah et al., 2018; Tuffour et al., 2022). Other researchers, such as Chowa and Despard (2014), Wahab and Bunyamin (2023), Berry et al. (2018), and Sarpong-Danquah et al. (2018), have also contributed to this body of knowledge.

In Ghana, despite the ever-evolving financial landscape offering a variety of financial products, a large portion of the population lacks the necessary skills to access these opportunities (Story et al., 2015). The government of Ghana has introduced Financial Literacy Week as an initiative to introduce the public to various financial and investment options. However, it is noteworthy that senior high school students are not the primary focus of this initiative, despite the government's efforts to promote financial literacy among its citizens.

Nonetheless, financial literacy education is crucial for senior high school students as it equips them with essential money management skills that they can utilize throughout their early adult years. By providing financial education to students at this stage, it empowers them to make informed financial decisions and navigate the complexities of the financial world with confidence and competence.

Developing a habit of saving takes time, and financial literacy plays a crucial role in fostering a culture of saving. Without adequate financial knowledge, individuals often succumb to the temptation of upgrading their lifestyles and indulging in luxury purchases (Hayei & Khalid, 2019). As people grow older, saving becomes more challenging, especially if they have not cultivated the habit of saving when they were young. Instead of saving, many individuals choose to increase their spending, which can have long-term repercussions on their financial well-being.

In Ghana, young adults face particular challenges in saving due to their early career stages and limited earning potential, compounded by the relatively high cost of living, especially in urban areas (Amfo et al., 2019). A significant portion of young Ghanaians prioritize spending on basic needs such as food, housing, and transportation. Additionally, there is a trend among Ghanaian young adults to allocate their funds towards social and recreational activities like socializing with friends, attending events, sports, and travel.

The amount spent on these activities varies significantly based on individuals' levels of financial literacy and personal preferences. Notably, previous studies on financial literacy in Ghana, which mostly focused on university and postsecondary education students, did not delve into the connection between financial literacy and spending patterns (Oseifuah et al., 2018; Opoku, 2016). Interestingly, courses on credit card usage, banking, and investing have been found to aid individuals in basic money management skills (Bapat, 2019). This underscores the importance of providing financial literacy and money management education, particularly to younger individuals who often lack sufficient instruction in these areas.

This study aims to address this gap in the literature by examining the levels of financial literacy and education among senior high school students in Ghana and exploring how these factors influence their spending behaviors. By shedding light on these relationships, the study aims to contribute valuable insights into the role of financial education in shaping the financial habits of young individuals.

Financial education plays a crucial role in business management, accounting, and economics, yet it remains a relatively rare subject in Senior High Schools (SHS). Within the realm of business studies, students delve into topics such as personal finance, budgeting, saving, investing, banking, and entrepreneurship. The teaching of financial education often integrates macro- and microeconomics, providing a deeper understanding of economic principles. Essential personal finance themes like financial planning, budgeting, consumer decisions, and comprehending economic indicators are integral parts of economics education. Through these concepts, students can gain a solid foundation in fundamental business and financial management principles.

This study aims to investigate the impact of financial education on financial literacy and spending habits, comparing the perspectives of both business and non-business students in specific SHSs. By exploring the viewpoints of students from different educational backgrounds, this research seeks to illuminate the potential effects of financial education on their understanding of financial concepts and their spending behaviors.

Purpose of the Study

The purpose of the study is to assess the impact of financial education on financial literacy and spending habits of senior high school business and non-business students. In achieving this broad aim, the following specific objectives will be tested;

Objectives of the Study

1. To examine the financial knowledge level of senior high school students in Takoradi
2. To determine the relationship between financial education and financial literacy of SHS students in Takoradi
3. To examine the relationship between financial education and spending habits of SHS students in Takoradi
4. To determine the gender difference in financial education and financial literacy of senior high school students in Takoradi

Research Hypotheses

1. Senior high school students in Takoradi exhibits high level of financial knowledge.
2. Senior high school students in Takoradi with higher levels of financial education will exhibit greater financial literacy.
3. There is a positive correlation between the extent of financial education received by SHS students in Takoradi and their responsible spending habits.

4. Male senior high school students in Takoradi will demonstrate higher levels of financial education and financial literacy compared to their female counterparts.

Significance of the Study

This research aims to shed light on the effects of financial literacy within an educational setting. By examining how financial education and literacy influence the spending habits of Senior High School (SHS) students, the study seeks to deepen our understanding of these dynamics. Additionally, it aims to introduce SHS students to the concepts of financial literacy and underscore its significance in making informed financial decisions regarding budgeting, interest rates, inflation rates, and money management.

As the study generates more insights into the relationships between financial literacy, education, and student spending behaviors, it will enable the formulation of specific recommendations to enhance financial education and literacy among students. These findings can be valuable for relevant ministries, organizations, and the education sector, aiding them in recognizing the advantages of financial literacy and education. It can also support the development of plans to integrate financial literacy into the curriculum effectively.

Organisation of the Study

There are five chapters in the study. An overview of financial education and its effects on senior high school students' financial literacy and saving habits is provided in Chapter 1, which also serves as an introduction. The problem statement, the study's goals and objectives, its importance, its scope, and its constraints will all be covered in this chapter.

The focus of Chapter 2 is a thorough analysis of pertinent research on saving habits, financial literacy, and financial education. The research approach is presented in Chapter 3. It provides a thorough analysis of the procedures used to conduct the study. This chapter will provide an overview of the data collecting and analysis procedure. In Chapter 4, the data analysis is presented along with a discussion of the analysis's conclusions and outcome. Chapter Five provides an overview of the study, makes recommendations for future research and policy formulation, and draws conclusions from the data collected.

Delimitation of the Study

The study's focus will be on seniors in high school, but solely in Takoradi. However, the research will not be restricted to a single financial literacy and education metric. Rather, the study's coverage of financial education will include peer-to-peer counseling, online courses, and classroom-based instruction. Simultaneously, the spending patterns of the targeted individuals will encompass a variety of spending categories. In other words, participant spending patterns will reduce expenditures on housing, entertainment, food, travel, clothes, and savings.

Limitations of the Study

This investigation has a number of limitations. It is anticipated that no more than 300 pupils from the chosen school will participate in this study. As a result, the study will have a small sample size and only one senior high school as its primary emphasis. As a result, it is impossible to generalize the study's conclusions to all Ghanaian schools.

Furthermore, this research will be survey-based, with the sole way to collect data being through pre-made questionnaires. One of the questionnaire's constraints is that the researcher should only obtain the data that is specifically requested in the questionnaire. Important details that are highly significant to the subject may be overlooked during the process. Consequently, including an interview with chosen respondents would have improved the caliber of this research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study's focus will be on seniors in high school, but solely in Takoradi. However, the research will not be restricted to a single financial literacy and education metric. Rather, the study's coverage of financial education will include peer-to-peer counseling, online courses, and classroom-based instruction. Simultaneously, the spending patterns of the targeted individuals will encompass a variety of spending categories. In other words, participant spending patterns will reduce expenditures on housing, entertainment, food, travel, clothes, and savings.

Theory of Planned Behavior

The Theory of Planned Behavior (TPB), a psychological framework developed to understand human behavior and decision-making, aims to delve into the intricate factors that shape an individual's intentions and subsequent actions (Pouladi et al., 2019). Evolving from the Theory of Reasoned Action (TRA) introduced by psychologist Icek Ajzen in the late 1980s, TPB seeks to illuminate the motivations of individuals, particularly when faced with choices that impact themselves or society. Within TPB, three interconnected components—attitude, subjective norms, and perceived behavioral control—merge to influence an individual's intention to engage in a specific activity. These components provide insights into the cognitive processes underlying human decision-making.

An individual's attitude represents their overall evaluation or perception of a particular activity, incorporating two elements within the TPB framework: beliefs about the outcomes of their actions and the evaluation of these outcomes as positive or negative (Jung et al., 2014). Positive or negative attitudes reflect an individual's sentiments regarding participation in the behavior. For instance, a student's attitudes towards responsible spending, financial literacy, and financial education can be inferred from their behaviors. Given the perceived benefits of financial knowledge, analyzing beliefs can predict whether someone is likely to practice sound money management.

Subjective norms refer to the expectations or perceived social pressures from significant individuals, such as friends, family, or classmates, regarding participation in a specific behavior (Ham et al., 2015). This component consists of two facets: compliance motivation and normative views. Normative views revolve around one's perception of what others should do, while compliance motivation relates to the drive to conform to these perceived norms. The social expectations, family influences, and peer group dynamics significantly impact the financial literacy and spending habits of Senior High School (SHS) students. TPB offers a lens to examine how a student's financial decisions are shaped by the customs and attitudes prevalent within their immediate social circles.

On the other hand, perceived behavioral control represents an individual's assessment of the ease or difficulty of performing a specific activity. This component encompasses factors such as personal capabilities, available opportunities, resources, and external constraints. A person's evaluation of their level of behavioral control directly influences their intention to participate in a behavior. Generally, higher perceived behavioral control is linked with increased intentions to engage in the behavior. The interplay of these three elements—attitude, subjective norms, and perceived behavioral control—shapes an individual's behavioral intention towards a particular action.

Behavioral intention, defined as the conscious goal or motivation behind an action, stands as one of the most influential predictors of whether the behavior will actually manifest. Following financial education, students' likelihood of developing responsible spending habits can be gauged by examining their perceptions of control over financial matters. This insight into their perceived ability to manage finances effectively provides valuable indicators of their potential actions and behaviors in financial decision-making.

Social Cognitive Theory

The Social Cognitive Theory, an extensive framework established by psychologist Albert Bandura, delves into how individuals acquire and utilize information, behaviors, and emotional responses from their interactions with people and the environment around them (Allan, 2017). This theory emphasizes the dynamic interplay among behavior, cognitive processes, and environmental circumstances, highlighting the reciprocal relationship that exists between them.

According to Cognitive Theory, learning does not solely occur through firsthand experiences but also through observing and imitating the behaviors, opinions, and emotions of others—an approach known as observational learning or modeling (Allan, 2017). Bandura introduced the term "modeling" to describe how individuals learn from the actions and experiences of peers, role models, and media representations. This process can lead to the development of new behaviors or the adaptation of existing ones, suggesting that cognitive processes serving as mediators between inputs and responses play a significant role in shaping behavior, alongside reinforcement and punishment.

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The theory also emphasizes reciprocal determinism, which asserts that behavior, the environment, and individual characteristics—such as emotions, biological traits, and cognitive abilities—constantly interact to shape human behavior. Individuals actively contribute to shaping their environment through the decisions and actions they take, highlighting the role of personal agency in actions and choices within this framework.

Observational learning stands as a pivotal element of the Social Cognitive Theory and holds significant relevance to financial education (Van

Campenhout, 2015). For example, Senior High School (SHS) students often glean valuable insights into money management by observing the financial decisions and actions of various individuals—such as celebrities, relatives, and peers. This supports the notion that exposure to effective financial education models and positive role models can influence students' financial knowledge and behaviors. The theory suggests that individuals are more inclined to mimic behaviors they perceive as beneficial or encouraging. Therefore, when students are exposed to financial education programs emphasizing the advantages of prudent financial practices and illustrating how such practices lead to favorable outcomes, they are more likely to adopt these behaviors themselves. Given that students are more likely to exhibit proper money management when they witness the positive returns on their investments, this aspect holds particular relevance to spending patterns and financial literacy.

The Social Cognitive Theory places a strong emphasis on self-regulation, requiring individuals to set goals, monitor their progress, and adjust their behaviors accordingly. When applied to financial education, students who learn how to establish financial goals, track their expenditures, and assess their achievements are more likely to cultivate strong financial habits and financial literacy. This perspective underscores the importance of equipping students with practical tools for managing their finances effectively. Furthermore, the theory suggests that individuals are more inclined to act in specific ways if they believe their actions will yield positive outcomes. When students are educated in financial literacy, illustrating how making informed financial decisions can lead to enhanced financial security and an improved quality of life, they are more likely to internalize these expectations and modify their spending behaviors accordingly.

Conceptual Review

The conceptual review explains the relevant variables in the study. In this section, financial education, financial literacy and spending habits are explained alongside how these variables are measured.

Financial Education

The theory also emphasizes reciprocal determinism, which asserts that behavior, the environment, and individual characteristics—such as emotions, biological traits, and cognitive abilities—constantly interact to shape human behavior. Individuals actively contribute to shaping their environment through the decisions and actions they take, highlighting the role of personal agency in actions and choices within this framework.

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There is a growing recognition of the importance of financial education for individuals of all ages, leading to its increasing popularity. Early financial education is particularly crucial as financial mistakes made during youth can have long-lasting effects (Lusardi & Mitchell, 2014). Many teenagers and preteens handle significant amounts of money and are beginning to engage in careers. It is essential to ensure that young people grasp fundamental financial concepts before they are tasked with making long-term financial decisions as adults. The primary objective of financial education is to empower individuals to take control of their financial lives, imparting essential knowledge on topics such as debt management, savings, budgeting, and the power of compounding (Dwiastanti, 2015).

Financial education provides a solid foundation in these concepts, enabling individuals to understand how their daily decisions impact their long-term financial security. Through knowledge of budgeting, individuals can allocate funds from their income for savings, discretionary expenses, and necessities without overspending or accumulating excessive debt. Additionally, financial education offers in-depth understanding of investments, helping individuals differentiate between various investment options, comprehend the dynamics of risk and return, and build diversified investment portfolios tailored to their risk tolerance and financial objectives.

Bhushan and Medury (2014) define financial education as the acquisition of knowledge, skills, and attitudes necessary to manage money, save, invest, borrow, and make other financial decisions wisely and efficiently. This encompasses learning about various aspects of financial management, such as investing, retirement planning, budgeting, and saving.

The goal of financial education is to empower individuals to make responsible and informed financial decisions that align with their values and goals, enabling them to navigate complex financial systems and achieve their financial objectives. The importance of financial education is increasingly recognized, with more people acknowledging its necessity for individuals of all ages (Lusardi & Mitchell, 2014). Early financial education is particularly crucial, as mistakes made in financial matters during youth can have long-lasting effects. Many teenagers and preteens handle significant amounts of money, often beginning their careers. It is essential for young people to grasp fundamental financial concepts before they are expected to make long-term financial decisions as adults.

Financial education aims to provide individuals with a strong foundation in concepts such as debt management, savings, budgeting, and the impact of compounding (Dwiastanti, 2015). This knowledge allows people to understand how their everyday decisions can influence their long-term financial security. For instance, learning to create a budget enables individuals to allocate funds from their income towards savings, discretionary expenses, and necessities without overspending or accumulating excessive debt.

Furthermore, financial education emphasizes the importance of planning for major life events, such as purchasing a home, funding college expenses, and securing retirement. By understanding financial planning basics, individuals can develop strategies to achieve these goals while safeguarding their overall financial well-being. Concepts like interest rates, inflation, potential tax implications, and the time value of money are crucial components of effective financial planning.

Beyond individual benefits, financial education also contributes to a more stable and equitable society. Economies function more efficiently when individuals make sound financial decisions. Financially literate individuals are less susceptible to exploitation by predatory lenders, which can lead to cycles of debt and financial instability. Additionally, by providing people from diverse backgrounds with access to resources and information to improve their financial well-being, financial education helps promote a fairer and more inclusive society (Garg & Singh, 2018).

Defining and measuring Financial Literacy

all ages (Lusardi & Mitchell, 2014). Early financial education is particularly crucial, as mistakes made in financial matters during youth can have long-lasting effects. Many teenagers and preteens handle significant amounts of money, often beginning their careers. It is essential for young people to grasp fundamental financial concepts before they are expected to make long-term financial decisions as adults.

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Financial literacy, as described by Cude (2021), encompasses a multifaceted set of attributes including awareness, knowledge, skills, attitudes, and behaviors. It represents the foundation necessary for individuals to make informed and prudent financial decisions, ultimately leading to the attainment of personal financial well-being. This holistic perspective acknowledges that financial literacy goes beyond mere knowledge of financial concepts; it also involves an understanding of one's financial situation, the ability to assess financial risks, and the capacity to apply financial principles effectively in real-life situations.

On the other hand, Kumari (2020) offers a complementary perspective, viewing financial literacy as the practical application of various financial skills such as investing, budgeting, and personal financial management. This definition emphasizes the importance of not only understanding financial concepts but also being able to apply them in practice to achieve desired financial outcomes. It highlights the hands-on aspect of financial literacy, focusing on the ability to utilize financial knowledge to make informed decisions, manage financial resources effectively, and plan for the future.

Together, these perspectives underscore the multidimensional nature of financial literacy, which encompasses not only theoretical knowledge but also practical skills, attitudes, and behaviors. Achieving financial literacy involves not only acquiring knowledge about financial concepts but also developing the ability to apply this knowledge in real-world scenarios, navigate financial challenges, and make informed decisions that align with one's financial goals and values. Ultimately, fostering financial literacy among individuals is essential for promoting financial well-being, resilience, and empowerment in both personal and professional contexts.

In essence, financial literacy entails effectively managing finances and making informed decisions about personal financial matters. Singh and Kumar (2017) argue that individuals' capability to prudently and effectively manage all their financial resources also relies on their knowledge and skill set.

The various definitions of financial literacy proposed by Cude (2021), Kumari (2020), Singh and Kumar (2017), Bilal and Zulfiqar (2016), and Cude and Kumar (2017) share commonalities while also presenting distinctions. They all emphasize the fundamental concept of skillfully managing financial resources to achieve long-term financial well-being. A consistent theme across these definitions is the importance of making informed judgments. They underscore the significance of basing financial decisions on a solid foundation of knowledge and expertise, highlighting the pivotal role of understanding in financial competency.

While prudent financial management is emphasized in all definitions, Cude's (2021) framework expands the notion of financial literacy by including elements such as awareness, knowledge, skills, attitudes, and behaviors. This comprehensive approach acknowledges that acquiring financial literacy goes beyond acquiring new skills; it also recognizes the role that attitudes and behaviors play in shaping financial outcomes.

The definitions presented above demonstrate distinct focuses and scopes. Kumari's (2020) definition, emphasizing the capacity to comprehend and apply various financial skills highlights the practical aspect of financial literacy. Conversely, Singh and Kumar (2017) along with Bilal and Zulfiqar (2016) stress the importance of understanding financial concepts alongside effective financial resource management. This perspective underscores the necessity for a comprehensive framework encompassing both skills and decision-making abilities.

Cude's (2021) integration of attitudes and behaviors emphasizes the psychological dimension of financial literacy, recognizing the significant role that individual perspectives and approaches to financial matters play. This additional layer adds complexity to the concept, encompassing not only the cognitive and practical aspects of financial decision-making but also the behavioral, emotional, and pragmatic aspects.

Financial literacy encompasses a broad range of fundamental skills and knowledge essential for navigating the intricate landscape of personal finance. It entails understanding and adeptly managing various financial aspects such as budgeting, cash flow management, and making informed decisions regarding debt management, investing, and saving. Moreover, it involves the ability to decipher financial terminology, comprehend different types of financial products and services, and weigh their pros and cons.

A foundational understanding of economics, taxation, insurance, retirement planning, and consumer rights is also integral to financial literacy. These skills empower individuals to make sound financial decisions, thereby achieving their short- and long-term goals while steering clear of common pitfalls and fraudulent schemes.

According to Frederiks et al. (2015), spending habits are recurring patterns of financial behavior influenced by psychological factors such as attitudes, emotions, and cognitive biases that impact people's decisions when purchasing goods and services. These habits are defined as the regular spending and saving behaviors that indicate individuals' preferences for allocating their money among various investment and consumption options. Beshears et al. (2018) further describe spending habits as the routine and consistent financial behaviors exhibited by individuals or households when determining the allocation of funds towards different products, services, or investment choices. These decisions are shaped by personal preferences, socioeconomic circumstances, and external influences. Spending habits, as outlined by Burger et al. (2015), represent the consistent behavioral patterns determining how individuals or households utilize their finances to acquire various goods and services. These inclinations are influenced by diverse factors including personal values, lifestyle choices, income levels, financial objectives, and cultural norms, reflecting individuals' approaches to financial management.

At the core of spending patterns lie the mental processes guiding the allocation of financial resources. Some individuals adopt a cautious approach, prioritizing savings and closely monitoring expenditures to align with their long-term financial plans. Conversely, others exhibit extravagant spending habits, frequently indulging in non-essential items without much consideration for their financial circumstances. Both discretionary and non- discretionary expenditures form part of spending habits (Diaz-Cayeros et al., 2016). Discretionary spending encompasses indulgences such as entertainment, dining out, or luxury items, often reflecting personal tastes and lifestyle preferences. On the other hand, non-discretionary spending includes essential expenses for basic survival, such as housing, utilities, groceries, and healthcare, which generally maintain a more consistent and stable budget.

Various methods, such as tests, experiments, and surveys, can be employed to measure financial literacy. However, many studies (Wagner, 2015; Omakhanlen et al., 2021) utilize surveys or structured questionnaires to assess participants' financial literacy. These tools involve posing a series of questions regarding individuals' knowledge, skills, and financial behaviors.

This investigation followed a similar approach, utilizing a questionnaire commonly used in the literature to evaluate participants' financial literacy and knowledge.

Even international organizations like the International Network on Financial Education (INFE) and the Organization for Economic Cooperation and Development (OECD) have developed a questionnaire to assess financial literacy consistently across various countries. This questionnaire aims to provide insights into individuals' perceptions, actions, and understanding of diverse financial concepts and practices.

Spending Habits

According to Frederiks et al. (2015), spending habits are recurring patterns of financial behavior influenced by psychological factors such as attitudes, emotions, and cognitive biases that impact people's decisions when purchasing goods and services. These habits are defined as the regular spending and saving behaviors that indicate individuals' preferences for allocating their money among various investment and consumption options. Beshears et al. (2018) further describe spending habits as the routine and consistent financial behaviors exhibited by individuals or households when determining the allocation of funds towards different products, services, or investment choices. These decisions are shaped by personal preferences, socioeconomic circumstances, and external influences. Spending habits, as outlined by Burger et al. (2015), represent the consistent behavioral patterns determining how individuals or households utilize their finances to acquire various goods and services. These inclinations are influenced by diverse factors including personal values, lifestyle choices, income levels, financial objectives, and cultural norms, reflecting individuals' approaches to financial management.

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At the core of spending patterns lie the mental processes guiding the allocation of financial resources. Some individuals adopt a cautious approach, prioritizing savings and closely monitoring expenditures to align with their long-term financial plans. Conversely, others exhibit extravagant spending habits, frequently indulging in non-essential items without much consideration for their financial circumstances. Both discretionary and non-discretionary expenditures form part of spending habits (Diaz-Cayeros et al., 2016). Discretionary spending encompasses indulgences such as entertainment, dining out, or luxury items, often reflecting personal tastes and lifestyle preferences. On the other hand, non-discretionary spending includes essential expenses for basic survival, such as housing, utilities, groceries, and healthcare, which generally maintain a more consistent and stable budget.

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Prudent money management practices resulting from good spending habits enable individuals to invest for the future, save for emergencies, and achieve long-term financial objectives. Conversely, unhealthy spending patterns, such as excessive hoarding or accumulating unnecessary debt, can strain finances, impede goal achievement, and limit opportunities for financial growth. Changes in priorities, financial literacy, and personal circumstances can all contribute to alterations in spending habits over time (Menjívar & Lakhani, 2016). Recognizing and understanding one's spending patterns constitute crucial initial steps towards attaining a stronger financial position. By thoughtfully evaluating spending decisions, individuals can make informed choices aligned with their financial goals, thereby fostering a more stable and secure financial future.

Children and adolescents also exhibit spending habits, although their patterns may vary significantly from those of adults due to factors such as limited financial resources, lack of financial responsibility, and developmental stages (Frederiks et al., 2015). Spending habits are not exclusive to adults and older individuals. Even at a young age, children start to develop basic spending habits by observing and imitating the spending behaviors of their parents or caregivers. They begin to grasp the concept of money and use gifts or allowances to make simple purchases, laying the foundation for their initial spending habits and attitudes toward money.

As children progress into their teenage and young adult years, their spending patterns become more evident and complex. Influenced by peer pressure, media exposure, and cultural trends, their preferences for specific products, brands, and experiences are often strongly shaped (Beshears et al., 2018). Teens may start receiving allowances or take on part-time jobs to earn their own money, increasing their sense of financial independence and responsibility. The spending habits of young individuals can vary significantly based on factors such as their values, financial goals, and personal interests. While some may prioritize saving for specific expenses, others may engage in more impulsive purchases (Burger et al., 2015).

The rise of digital payment systems and online shopping has introduced new dynamics to how young people manage their finances and make purchases. These technological advancements have influenced the way in which they handle their money, presenting novel changes in their spending behaviors (Diaz-Cayeros et al., 2016).

Empirical Literature

Financial knowledge level of senior high school students

Children and adolescents also exhibit spending habits, although their patterns may vary significantly from those of adults due to factors such as limited financial resources, lack of financial responsibility, and developmental stages (Frederiks et al., 2015). Spending habits are not exclusive to adults and older individuals. Even at a young age, children start to develop basic spending habits by observing and imitating the spending behaviors of their parents or caregivers. They begin to grasp the concept of money and use gifts or allowances to make simple purchases, laying the foundation for their initial spending habits and attitudes toward money.

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As children transition into their teenage and young adult years, their spending patterns become more pronounced and intricate. Influenced by peer pressure, media exposure, and cultural influences, adolescents develop preferences for specific products, brands, and experiences (Beshears et al., 2018). Many teenagers start receiving allowances or take on part-time jobs to earn their own money, which enhances their sense of financial independence and accountability. The spending habits of young individuals can vary widely based on their values, financial objectives, and personal interests. While some prioritize saving for particular expenses, others may engage in more impulsive purchases (Burger et al., 2015).

Overall, understanding the evolution of spending habits from childhood through adolescence and young adulthood underscores the importance of financial education and guidance during these formative years. Encouraging responsible financial behavior, cultivating a mindset of saving and budgeting, and promoting critical thinking about spending choices are essential for empowering young individuals to make informed financial decisions and achieve financial well-being as they navigate through different life stages.

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Mandell and Klein (2009) conducted an investigation into the lasting impacts of a personal finance management course on high school students, up to four years after completion. Utilizing a matched sample design based on data from a school system, the study sought to discern differences between students who had taken a personal money management course and those who had not. Children and adolescents exhibit spending behaviors that differ from adults, largely influenced by factors such as their limited financial resources, level of financial responsibility, and developmental stages (Frederiks et al., 2015). Although spending habits are commonly associated with adults, even at a young age, children begin to develop rudimentary spending patterns by observing and imitating their parents' or caregivers' spending behaviors. This early exposure to financial transactions helps children grasp the concept of money and utilize gifts or allowances to make simple purchases, laying the groundwork for their initial spending habits and attitudes toward money.

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The research findings suggest that individuals who receive some form of financial education tend to exhibit higher levels of financial literacy compared to those who have not received formal education in finance. This highlights the significant impact of financial education in improving individuals' understanding of financial concepts and their ability to make informed financial decisions. Importantly, the study also indicates that financial education has a particularly notable effect on individuals with lower incomes and educational attainment levels. This underscores the crucial role of financial education in empowering underserved populations to manage their finances effectively and achieve greater financial well-being.

Moreover, the relationship between mandatory financial education in high schools and its impact on credit card use has been a subject of interest in various studies. For instance, a study conducted by Brown et al. (2014) employed the difference-in-difference technique to evaluate the effects of mandated financial education on credit practices among young individuals aged under 22 years old. This research approach allows for the comparison of changes in credit card use over time between individuals exposed to mandatory financial education and those who were not. By examining the outcomes of such interventions, researchers can assess the effectiveness of financial education policies in influencing financial behaviors and promoting responsible credit management among young adults.

Overall, these studies contribute to our understanding of the importance of financial education initiatives, particularly in educational settings, and their potential to positively impact individuals' financial literacy and behaviors. By equipping individuals with the knowledge and skills necessary to navigate complex financial decisions, financial education programs can help promote financial resilience, reduce financial stress, and foster long-term financial well-being across diverse demographic groups.

The study compared the behavior of individuals in states with mandated financial education programs (such as Texas, Georgia, and Idaho) to a control group comprising states with no such requirements but similar characteristics to the treatment states. These states were selected as they had implemented changes to their financial education curriculum but had not introduced additional reforms in education at the time of data collection. The study revealed improvements in credit card scores and reductions in loan delinquencies among young individuals in states with mandatory financial education programs. Notably, this study improved upon prior research methodologies by considering the year of implementation of the requirement in the classroom, rather than the legislative year, accounting for potential delays between policy enactment and implementation.

Students’ financial education, financial literacy and spending habits

The correlation between spending behaviors, financial literacy, and financial education underscores the importance of equipping individuals, particularly students, with the knowledge and skills necessary for prudent money management. Through the promotion of financial literacy and education, individuals can develop the capacity to make more informed and responsible financial choices, ultimately leading to improved spending habits and enhanced financial well-being. Achieving lasting improvements in individuals' financial lives requires a comprehensive approach, recognizing the myriad of complex factors that influence financial behaviors.

In a study by Farinella et al. (2017), the relationship between higher income, social equality, and financial literacy among high school students was explored. Previous research has indicated a link between financial literacy and both increased per capita income and social equality. The study sought to determine whether enrollment in a high school money management course contributed to improved financial literacy. Surprisingly, the results indicated that participation in a money management course did not lead to a significant increase in financial literacy among high school students. However, when the material was covered in a different course, students showed improved financial literacy. Additionally, taking a money management course did not reduce the likelihood of students accumulating debt, but those who took another course on money management were more likely to remain debt-free. These findings suggest that the effectiveness of money management classes in high schools may need reevaluation.

Children and adolescents demonstrate spending habits that differ from those of adults, largely influenced by factors such as their limited financial resources, level of financial responsibility, and developmental stages (Frederiks et al., 2015). Although spending habits are commonly associated with adults and older individuals, it is crucial to recognize that even at a young age, children begin to develop rudimentary spending patterns by observing and imitating the spending behaviors of their parents or caregivers. This early exposure to financial transactions helps children grasp the concept of money and its role in everyday life.

As children grow, their understanding of money deepens, and they gradually learn to manage their finances within the constraints of their allowances or resources provided by parents. They may start using gifts or allowances to make simple purchases, such as toys or snacks, thereby laying the foundation for their initial spending habits and attitudes toward money. These early experiences shape their perceptions of money management, consumption, and saving, influencing their financial behaviors in the future.

Furthermore, spending habits evolve as children transition into adolescence and young adulthood. Influenced by peer pressure, media exposure, and societal norms, adolescents develop preferences for specific products, brands, and experiences (Beshears et al., 2018). They may begin to seek greater financial independence by taking on part-time jobs or managing larger allowances, which further shapes their spending habits and financial decision- making skills.

Overall, understanding the development of spending habits from childhood through adolescence is essential for promoting financial literacy and responsible money management among young individuals. By providing guidance, education, and positive role modeling, parents, caregivers, and educators can help children and adolescents develop healthy spending habits, budgeting skills, and attitudes toward money that will serve them well throughout their lives.

An (2018) conducted a study to assess the personal financial literacy levels of Management Faculty staff members using a standardized questionnaire. Their research aimed to explore the relationship between financial literacy and spending habits among the staff. The data analysis involved descriptive statistics, multiple regression, and Pearson correlation techniques using the Statistical Package for Social Science. The study's findings indicated that the staff members' prudent spending practices were influenced by their higher levels of financial knowledge. Furthermore, the employees expressed that financial education could enhance their understanding of finance, thereby improving their financial planning. Ultimately, the study revealed a significant correlation between spending habits and financial knowledge.

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The study revealed that a notable number of students obtained financial management information through social media campaigns on platforms like Facebook, Twitter, and YouTube. Additionally, a majority of participants expressed a belief that neither institutions nor teachers offered adequate financial literacy education, which they deemed crucial for effective money management in the future. The analytical section of the study indicated that a significant portion of college students lacked the necessary financial literacy skills to manage their expenses independently.

In their study, Wuisang et al. (2023) focused on assessing the spending habits and level of financial literacy among economics students at Manado State University. Employing statistical analysis with the Statistical Package for Social Sciences (SPSS) software, they collected data from sixty-eight respondents using the Slovin method. The participants were selected randomly, and surveys were distributed and analyzed using statistical tests such as the t-test and f-test.

The findings of the study revealed distinct influences on money management attributed to both spending habits and financial literacy. Interestingly, while financial literacy had a limited impact on financial management, spending behaviors showed a significant influence. This suggests that the actual behaviors related to spending, such as budgeting, saving, and investing, play a more critical role in shaping individuals' financial management practices compared to their level of financial knowledge.

Moreover, when examining the combined effects of financial literacy and spending habits on financial management, the study found the impact to be statistically insignificant. This result implies that while both financial literacy and spending habits independently influence financial management, their combined effect may not necessarily result in a significant

improvement in

individuals' financial management practices. This underscores the complexity of factors contributing to financial management and suggests that interventions targeting either financial literacy or spending habits alone may not be sufficient to drive substantial changes in financial behavior.

Overall, the study highlights the importance of considering both financial literacy and spending habits in efforts to enhance individuals' financial management skills. It underscores the need for comprehensive financial education programs that not only impart knowledge but also promote responsible spending behaviors and practical money management skills. By addressing both aspects, educators and policymakers can better equip individuals with the tools and strategies needed to make informed financial decisions and achieve long-term financial well-being.

Gender difference in financial education and financial literacy

Departments collaborate closely to ensure seamless coordination in designing and producing assembled products, possessing technical proficiency and production capabilities are vital to meeting established standards for the final product. Consequently, effective integration emerges as a critical managerial task, requiring a delicate balance between decentralization and centralization to optimize operational efficiency across the organization. This integration plays a pivotal role in fostering consistent functionality among diverse participants, enabling them to synchronize efforts and collectively pursue the organization's objectives. The concept of interdepartmental process integration entails establishing overarching goals alongside department-specific sub-goals, ensuring that each individual comprehensively understands their roles and how their contributions collectively contribute to achieving the organization's overall objectives (Tushman & Nadler, 2006).

Expanding on this, in multifunctional organizations, collaboration among various departments is essential to ensure that products meet established standards and customer expectations. Technical expertise and production capabilities play a crucial role in this process, as they determine the quality and efficiency of the final product. Effective integration of departments is necessary to streamline processes, minimize redundancies, and maximize resource utilization.

Achieving seamless integration requires a careful balance between decentralization, allowing departments autonomy in their operations, and centralization, ensuring alignment with organizational goals and objectives. This balance is crucial for optimizing operational efficiency and maintaining agility in responding to market demands and changes.

Interdepartmental process integration involves aligning departmental goals with the overarching objectives of the organization. It requires clear communication and collaboration among departments to ensure that everyone understands their roles and responsibilities in contributing to the organization's success. By fostering a shared understanding of goals and objectives, interdepartmental integration enables departments to work cohesively towards common objectives, enhancing overall organizational performance.

Lee and Hanna (2014) examined the pathways of financial knowledge leading to money management awareness, attitude, behavior, and outcomes among Asian college students, while also delving into gender disparities. The study utilized various quantitative data collection and analysis methods, including independent t-tests, confirmatory factor analysis, and correlation. Results revealed that financial information influences attitude, which subsequently drives behavior, ultimately determining outcomes. However, the study highlighted gender-specific differences in the pathways of financial knowledge.

Bannier and Neubert (2016) investigated the impact of risk tolerance and financial literacy on gender disparities in financial risk-taking. Their study utilized quantitative data from a representative household survey conducted by the Munich Center for the Economics of Aging (MEA) in Germany in 2009. The perceived literacy score was derived from respondents' subjective opinions on financial literacy in the survey, with a dataset consisting of 2047 responses. The researchers analyzed financial risk- taking concerning both straightforward and sophisticated financial investments. The findings indicated that standard investments showed a significant connection with perceived and actual financial literacy for men, while for women, they were linked only with actual literacy. Conversely, sophisticated investments exhibited a strong correlation with perceived financial literacy, especially among women. Notably, the study found no correlation between women's sophisticated investments and risk tolerance.

In their study, Almenberg and Dreber (2015) investigated the relationship between the gender gap in stock market participation and financial literacy.

They aimed to understand to what extent basic financial literacy, which measures numeracy skills without requiring comprehension of the stock market, contributes to the gender disparity in stock market involvement.

The findings of their analysis indicated that a significant portion of the gender gap in stock market participation could be explained by basic financial literacy. Basic financial literacy, in this context, refers to individuals' numeracy skills and understanding of fundamental financial concepts, such as interest rates, inflation, and compound interest, rather than their specific knowledge of the stock market.

The study suggests that individuals with higher levels of basic financial literacy are more likely to participate in the stock market, regardless of gender. However, it also highlights that women tend to have lower levels of basic financial literacy compared to men, which may contribute to the gender gap in stock market involvement.

By identifying basic financial literacy as a key factor influencing stock market participation, the study underscores the importance of financial education initiatives aimed at improving numeracy skills and enhancing individuals' understanding of fundamental financial concepts. Addressing gender disparities in financial literacy through targeted educational interventions could potentially help narrow the gender gap in stock market participation and empower more individuals, particularly women, to take advantage of investment opportunities and build wealth over the long term.

The researchers postulated that individuals with higher levels of financial literacy might exhibit more accurate and balanced perceptions of financial risks, thereby potentially mitigating gender disparities in risk perceptions.

Despite considering financial literacy in their analysis, the study uncovered a persistent gender gap in risk perceptions. Even when accounting for differences in financial literacy levels between men and women, women still tended to perceive themselves as less willing to take risks compared to men. This suggests that factors beyond financial literacy contribute to the observed gender differences in risk perceptions.Several potential explanations could elucidate why the gender gap in risk perceptions persists despite considerations of financial literacy. Firstly, societal and cultural norms may influence individuals' attitudes towards risk- taking differently based on gender. Stereotypes and societal expectations regarding risk behavior may shape individuals' perceptions and willingness to take risks.

Secondly, psychological factors such as risk aversion and overconfidence may vary between genders, impacting how risks are perceived and assessed. Research in behavioral economics has indicated that women, on average, tend to exhibit higher levels of risk aversion compared to men, which could contribute to the observed gender gap in risk perceptions. Additionally, personal experiences and exposure to financial risks may differ between genders, influencing their risk perceptions. Women may encounter unique life experiences or societal pressures that shape their attitudes towards risk-taking differently from men.

Overall, while financial literacy plays a crucial role in shaping individuals' understanding and management of financial risks, it is not the sole determinant of risk perceptions, especially concerning gender differences. Social, cultural, psychological, and experiential factors also contribute to shaping individuals' attitudes towards risk-taking, highlighting the complexity of the relationship between financial literacy, gender, and risk perceptions.

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Oseifuah (2014) explored the correlation between financial literacy and various demographic and socioeconomic characteristics among a sample of undergraduate students, aiming to understand how their financial literacy relates to attitudes and behaviors concerning personal finance matters. Data was gathered using a structured questionnaire, and analysis was conducted using the Statistical Package for Social Scientists software through logistic regression and Chi-Square statistical techniques. The findings from the study suggested that students who had taken a money management course were more likely to exhibit financial literacy. Additionally, the research revealed statistically significant gender differences in financial literacy, with male accounting students showing a higher likelihood of financial literacy compared to female students.

The study conducted by Moon et al. (2014) aimed to explore gender disparities in financial literacy among Chinese university students and to identify potential underlying factors contributing to these differences. To achieve this objective, the researchers collected data through questionnaires administered to male and female students from three prominent Chinese universities: Wuhan University, Fudan University, and Tongji University, all located in major Chinese cities.

In analyzing the objectives of the study, Moon et al. (2014) employed various statistical methods, including the independent t-test, one-way ANOVA, and hierarchical multiple regression analysis. These statistical techniques allowed the researchers to compare the levels of financial literacy between male and female students and to investigate the influence of different factors on financial literacy scores.

The study revealed several key findings regarding financial literacy among Chinese university students. Firstly, the overall level of financial literacy among the surveyed students was found to be relatively low, with an average score of 56.59. This score was notably lower compared to levels observed in Korea and other OECD member countries, indicating a potential area for improvement in financial education initiatives within China. Moreover, significant differences in financial literacy were observed between male and female students. Female students tended to exhibit lower levels of financial literacy compared to their male counterparts. This disparity raised questions about the factors contributing to gender differences in financial knowledge and skills.

One notable finding highlighted in the research was the limited access to transaction experience and financial education among female students in China. This suggests that gender disparities in financial literacy may be exacerbated by unequal opportunities for practical financial learning and education, particularly within the evolving socioeconomic landscape of China.

Overall, the study by Moon et al. (2014) sheds light on the gender disparities in financial literacy among Chinese university students and underscores the importance of addressing these disparities through targeted interventions aimed at improving access to financial education and practical learning experiences, particularly for female students. By addressing these disparities, policymakers and educators can empower all students with the necessary knowledge and skills to make informed financial decisions and navigate the complexities of the modern financial landscape.

Driva et al. (2016) conducted a study examining perceptions of financial literacy and gender disparities among high school students from select schools in three German cities. Utilizing a quantitative approach, data were collected through structured questionnaires. The survey results revealed a statistically significant variance in financial awareness between male and female respondents. However, the study found no correlation between differences in self-confidence, risk perceptions, numeracy skills, or socioeconomic factors and the gender gap in financial literacy. Both genders exhibited biased views regarding financial competence, with women less likely to hold self-assured beliefs compared to men, who tended to overestimate their abilities. Additionally, the research revealed that as women's financial knowledge decreased, their bias increased, whereas men demonstrated a stronger bias towards self-affirmation. Utilizing a quantitative approach, data were collected through structured questionnaires. The survey results revealed a statistically significant variance in financial awareness between male and female respondents. However, the study found no correlation between differences in self-confidence, risk perceptions, numeracy skills, or socioeconomic factors and the gender gap in financial literacy. Both genders exhibited biased views regarding financial competence, with women less likely to hold self-assured beliefs compared to men, who tended to overestimate their abilities. Additionally, the research revealed that as women's financial knowledge decreased, their bias increased, whereas men demonstrated a stronger bias towards self-affirmation.

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Despite the significant variance in financial awareness observed between genders, the study found no correlation between several factors—such as self- confidence, risk perceptions, numeracy skills, or socioeconomic factors—and the gender gap in financial literacy. This suggests that individual characteristics and socioeconomic backgrounds alone may not fully explain the observed differences in financial knowledge between men and women.

One interesting finding of the research is the presence of biased perceptions regarding financial competence among both male and female respondents. Women were less likely to hold self-assured beliefs about their financial abilities compared to men, who tended to overestimate their skills. This disparity in self-confidence may contribute to the observed gender gap in financial literacy, as individuals with lower confidence levels may be less inclined to engage in financial decision-making or seek out financial education opportunities.

Moreover, the study revealed a nuanced relationship between financial knowledge and bias. As women's financial knowledge decreased, their bias towards underestimating their abilities increased. Conversely, men exhibited a stronger bias towards self-affirmation, regardless of their level of financial knowledge. This suggests that gender differences in bias may interact with individuals' financial knowledge levels in shaping their perceptions of financial competence.

Overall, these findings highlight the multifaceted nature of gender differences in financial literacy and the need for comprehensive strategies to address them. Efforts to promote financial education and literacy should not only focus on improving knowledge and skills but also aim to foster confidence and address biased perceptions about financial competence among both men and women. By addressing these barriers, policymakers and educators can work towards narrowing gender gaps in financial literacy and empowering individuals of all genders to make informed financial decisions and achieve financial well-being.

The study revealed that confidence indeed plays a crucial role in mitigating the gender disparity in financial literacy, particularly concerning the comprehension of basic financial concepts. High levels of confidence were associated with narrower gender gaps in understanding fundamental financial principles. However, even after incorporating confidence variables into regression models and accounting for other factors, significant gender differences persisted, especially in more complex financial literacy assessments. This suggests that while confidence may help bridge certain aspects of the gender gap, substantial disparities remain in areas requiring deeper financial knowledge and skills.

Moreover, the research identified a notable confidence gap between male and female participants, indicating that males tend to exhibit higher levels of confidence in financial matters compared to their female counterparts. This disparity in confidence levels may contribute to the persistence of gender differences in financial literacy, as individuals with greater confidence may be more inclined to engage with financial concepts, seek out financial education opportunities, and apply financial skills in practice.

The findings of the study highlight the complex nature of gender disparities in financial literacy and emphasize the crucial role of confidence as a moderating factor in these differences. While the study revealed significant variations in financial literacy between male and female individuals, it also uncovered a notable confidence gap, with women generally exhibiting lower levels of self-assurance regarding their financial abilities compared to men.

This disparity in confidence may contribute to the observed gender gap in financial literacy, as individuals with lower confidence levels may be less inclined to engage in financial decision-making or seek out opportunities for financial learning and education.

Addressing the confidence gap between genders is essential for complementing efforts to enhance financial literacy among both men and women. Confidence-building initiatives can empower individuals to overcome self-doubt and develop the self-assurance needed to navigate the complexities of personal finance effectively. By fostering a sense of confidence in their financial abilities, individuals are more likely to actively engage in financial decision-making, seek out educational opportunities, and take control of their financial well-being.

Moreover, tailored educational interventions that aim to bolster confidence alongside improving financial knowledge and skills can play a significant role in narrowing the gender gap in financial literacy. By providing individuals with the tools, resources, and support needed to build confidence and develop essential financial competencies, these interventions can empower individuals of all genders to make informed financial decisions and achieve financial independence.

Overall, addressing gender disparities in financial literacy requires a multifaceted approach that acknowledges the interplay between confidence, knowledge, and skills. By promoting confidence-building initiatives and implementing tailored educational interventions, policymakers, educators, and organizations can work towards narrowing the gender gap in financial literacy and fostering greater financial empowerment and inclusivity for all individuals.

Conceptual Framework

The impact of financial education on financial literacy and spending habits of SHS students is shown in Figure 2.1.

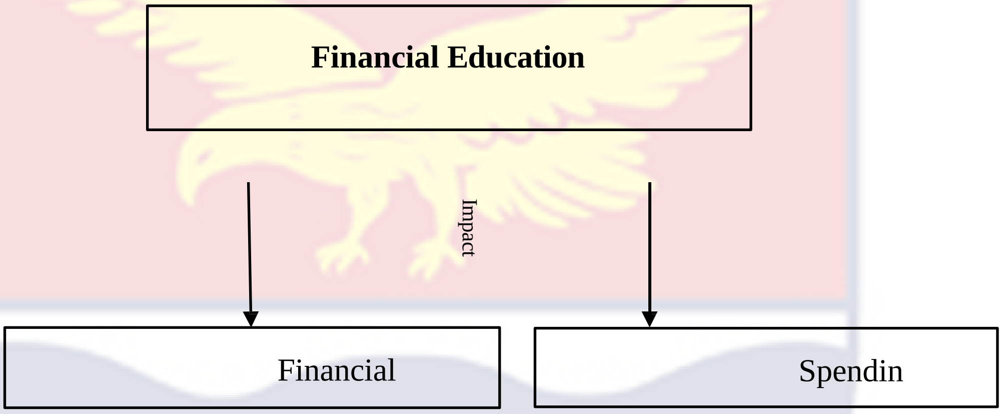

Figure 1: Conceptual Framework Source; Author (2023)

The increasing emphasis on core competencies within businesses has created a multitude of opportunities for logistics service providers. These providers serve as intermediaries in supply chains, facilitating the organized movement of goods from shippers to consignees (Christopher, 1998; Lai et al., 2004). As companies operate within supply chains, they are confronted with a strategic decision: whether to prioritize cost-efficiency or lead time efficiency. This choice significantly influences the provision of logistics services. Opting for cost-efficiency may involve streamlining operations to minimize expenses, while prioritizing lead time efficiency may focus on expediting the delivery process to meet tight deadlines and customer expectations.

Furthermore, logistics service providers are increasingly expanding their operations beyond domestic borders (Fisher, 1997; Lemoine, Dagnaes, 2003).

This globalization trend reflects the growing interconnectedness of markets and the need for efficient international logistics solutions. By extending their reach beyond national boundaries, logistics providers can tap into new markets, access diverse resources, and capitalize on economies of scale. However, operating internationally also presents challenges such as navigating complex regulatory frameworks, managing cultural differences, and ensuring seamless coordination across geographically dispersed networks.

The success of a logistics service provider relies heavily on its ability to operate based on reliable and comprehensive information regarding the overall performance of the company and its individual units. However, this critical activity is often conducted in an ad hoc manner, attributed to various factors. The challenge begins with the non-trivial task of selecting appropriate performance indicators. While companies have historically focused on financial indicators, the contemporary view recognizes the value of non-financial and non-numerical indicators, albeit more challenging to measure and compare (Chan, 2003).

Careful consideration is necessary when selecting performance indicators, as a comprehensive set could lead to a significant volume of data, requiring extensive efforts and expenses for collection and analysis. A practical strategy involves identifying the most pertinent indicators that align with the company's objectives. Thorough analysis is crucial to ensure the chosen set of indicators encompasses all relevant perspectives. It's not uncommon to encounter conflicting indicators, where enhancements in one aspect may negatively impact another (Kleijnen and Smits, 2003). This underscores the importance of balancing various performance metrics to effectively evaluate overall organizational performance. Expanding on this, the selection and measurement of performance indicators are crucial for evaluating the effectiveness and efficiency of logistics operations. Beyond traditional financial metrics, companies are increasingly recognizing the importance of non-financial indicators such as customer satisfaction, sustainability metrics, and operational excellence. However, measuring these indicators accurately and consistently poses significant challenges, requiring innovative approaches and technologies.

Furthermore, as logistics service providers expand their global footprint, they must navigate diverse regulatory environments, cultural nuances, and logistical challenges. Effective performance measurement systems can provide valuable insights into the performance of international operations, enabling companies to identify areas for improvement and optimize their global supply chain networks.

In summary, the selection and measurement of performance indicators are critical aspects of effective logistics management. By carefully selecting and analyzing relevant indicators, companies can gain valuable insights into their operations, drive continuous improvement, and maintain a competitive edge in today's dynamic business environment.

The increasing emphasis on core competencies within businesses has reshaped the landscape for logistics service providers, presenting them with a plethora of opportunities. These providers play a crucial role as intermediaries in supply chains, facilitating the smooth and organized movement of goods from shippers to consignees. As highlighted by Christopher (1998) and Lai et al.

(2004), their contributions are fundamental to ensuring the efficient functioning of supply chains and meeting customer demands.

Within the context of supply chain operations, companies often face a strategic decision regarding the prioritization of either cost-efficiency or lead time efficiency. This strategic choice has profound implications for the provision of logistics services and ultimately impacts the competitiveness and success of businesses in the marketplace.

Opting for cost-efficiency involves a focus on streamlining operations and minimizing expenses throughout the supply chain. This may entail implementing measures such as optimizing transportation routes, consolidating shipments, and leveraging economies of scale to reduce overall logistics costs. By prioritizing cost-efficiency, companies aim to maximize profitability and maintain competitive pricing in the market while still meeting customers' basic expectations regarding delivery times.

On the other hand, prioritizing lead time efficiency emphasizes the importance of expediting the delivery process to meet tight deadlines and exceed customer expectations for timely order fulfillment. This approach requires investments in technologies and processes that enable faster order processing, shipment handling, and delivery scheduling. By prioritizing lead time efficiency, companies aim to enhance customer satisfaction, build brand loyalty, and gain a competitive edge in the market by offering superior service levels.

Ultimately, the strategic decision between cost-efficiency and lead time efficiency reflects a balancing act for companies seeking to optimize their supply chain operations. While cost-efficiency helps control expenses and maintain financial sustainability, lead time efficiency is critical for meeting customer expectations and gaining a competitive advantage in today's fast- paced business environment. Effective logistics service providers play a pivotal role in supporting companies in achieving their strategic objectives by offering tailored solutions that align with their chosen approach, whether it be cost-efficiency, lead time efficiency, or a combination of both.

The increasing emphasis on core competencies within businesses has created a multitude of opportunities for logistics service providers. These providers serve as intermediaries in supply chains, facilitating the organized movement of goods from shippers to consignees (Christopher, 1998; Lai et al., 2004). As companies operate within supply chains, they are confronted with a strategic decision: whether to prioritize cost-efficiency or lead time efficiency. This choice significantly influences the provision of logistics services. Opting for cost-efficiency may involve streamlining operations to minimize expenses, while prioritizing lead time efficiency may focus on expediting the delivery process to meet tight deadlines and customer expectations.

Financial Education and Financial Literacy:

The null hypothesis (H0) posits that there is no significant influence of financial education on the financial literacy levels of senior high school students. Essentially, this hypothesis suggests that the financial education programs these students undergo do not lead to notable changes in their levels of financial literacy. It implies that any observed differences in financial literacy scores are likely due to random chance, extraneous factors, or factors unrelated to financial education. In simpler terms, the null hypothesis indicates that the existing financial education initiatives have little to no effect on the financial literacy of these students.

Conversely, the alternative hypothesis (H1) suggests that financial literacy among senior high school students is indeed influenced significantly by their participation in financial education programs. According to this hypothesis, students who engage in financial education programs are expected to exhibit higher levels of financial literacy compared to those who do not receive such instruction. This hypothesis proposes a direct and positive correlation between financial education and financial literacy among this specific group of students. In other words, it anticipates that the exposure to financial education will result in an improvement in the students' financial literacy levels. Therefore; the Null Hypothesis (H0): The financial literacy of senior high school students is not significantly impacted by financial education. Alternative Hypothesis (H1): The financial literacy of senior high school students is significantly impacted by financial education.

Financial Education and Spending Habits:

The null hypothesis (H0) posits that the financial literacy of senior high school students is not significantly influenced by participation in financial education programs. This hypothesis suggests that there is no direct relationship between receiving financial education instruction and the level of financial literacy among students. In other words, according to the null hypothesis, the exposure to financial education does not lead to any discernible improvement in students' financial literacy levels.

Conversely, the alternative hypothesis (H1) proposes that financial literacy among senior high school students is indeed affected significantly by their participation in financial education programs. This hypothesis suggests that students who engage in financial education initiatives are expected to demonstrate higher levels of financial literacy compared to those who do not receive such instruction. It posits a direct and positive correlation between financial education and financial literacy among this specific group of students. In essence, the alternative hypothesis anticipates that exposure to financial education will result in an enhancement of students' financial literacy levels over time.

The distinction between the null and alternative hypotheses lies in their assertions regarding the impact of financial education on students' financial literacy. While the null hypothesis assumes no effect of financial education, the alternative hypothesis asserts a meaningful and positive influence of financial education on financial literacy levels. These hypotheses serve as the foundation for hypothesis testing, allowing researchers to systematically evaluate the impact of financial education programs on students' financial literacy and draw conclusions based on empirical evidence.

Alternative Hypothesis (H1): Financial education has a significant influence on the spending patterns of senior high school students. This hypothesis proposes that the financial education these students receive plays a substantial role in shaping and improving their spending habits. It suggests that through financial education, students are better equipped to manage their money sensibly and make informed decisions about their spending. In essence, this hypothesis argues for a positive impact of financial education on the spending patterns of senior high school students.

Null Hypothesis (H0): Senior high school students' spending habits are not significantly affected by financial education.

Alternative Hypothesis (H1): Senior high school students' spending patterns are significantly impacted by financial education.

Chapter Summary

The chapter delves into the complex interplay among gender differences in spending habits, financial literacy, and financial education among high school students. It discusses two significant psychological theories, the Theory of Planned Behavior (TPB) and Social Cognitive Theory, which offer insights into human behavior and decision-making processes. The TPB, developed by psychologist Icek Ajzen, emphasizes the role of attitude, perceived behavioral control, and subjective norms in shaping behavior. In contrast, Albert Bandura's Social Cognitive Theory underscores the dynamic interplay of behavior, environmental factors, and cognitive processes, highlighting the importance of learning through observation and imitation.

The conceptual review section of the chapter provides a comprehensive exploration of the three main variables under study—financial education, financial literacy, and spending habits.

Financial education is depicted as a dynamic and ongoing process aimed at equipping individuals with the knowledge and skills necessary to make informed financial decisions. It emphasizes the societal benefits of financial education and highlights its importance starting from an early age.

However, the chapter also acknowledges the lack of a standardized measurement tool for assessing financial education, with surveys and questionnaires commonly used for evaluations.

The evolving definition of financial literacy is also examined, encompassing various dimensions such as informed decision-making, application of financial skills, and effective management of financial resources. This broader definition reflects the multifaceted nature of financial literacy and underscores its importance in navigating complex financial landscapes.

Additionally, spending habits are portrayed as recurring patterns of financial behavior influenced by psychological factors such as individual preferences and external influences. These habits play a significant role in determining individuals' financial well-being and can have long-lasting effects on their financial health. The chapter recognizes that spending habits develop early in life and evolve over time, highlighting the importance of addressing financial behaviors from a young age.

Overall, the conceptual review provides a comprehensive understanding of the key variables under study and sets the stage for further exploration of their interrelationships and implications for financial decision-making and well-being. By examining the nuances of financial education, financial literacy, and spending habits, the chapter lays the groundwork for a deeper analysis of how these factors shape individuals' financial outcomes and overall financial health.

1. Rigid quality standards serve as a crucial driver for the implementation of reverse logistics, especially in situations involving contaminated

products that pose environmental hazards. When products fail to meet stringent quality requirements, they pose risks to both consumers and the environment. In such cases, it becomes imperative to implement efficient and safe reverse logistics processes to handle these products appropriately. Efficient reverse logistics processes facilitate the transportation of non-compliant or contaminated products back to their place of manufacture for proper disposal or re-processing, involving careful handling, packaging, and transportation to prevent further contamination or environmental harm, while also tracking and documenting the entire process to ensure transparency and accountability. Moreover, reverse logistics plays a critical role in sustainable waste management by promoting the reuse, recycling, or safe disposal of returned products, aligning with the principles of the circular economy. Additionally, the implementation of reverse logistics in cases of product contamination helps protect brand reputation and consumer trust by demonstrating the organization's commitment to quality, safety, and environmental stewardship, thereby maintaining customer confidence and loyalty.

As the chapter concludes, it presents a conceptual framework outlining the theories to be explored in the subsequent research. The hypotheses focus on potential gender differences in high school students' financial literacy, the impact of financial education on their spending habits, and the influence of financial education on financial literacy.

CHAPTER THREE

RESEARCH METHODS

Introduction

The chapter presents information on the process of data collection and analysis. It spelt the research approaches adopted, the design, the population and sampling, the data collection process and its analysis.

Research Approach

Rigid quality standards serve as a crucial driver for the implementation of reverse logistics, especially in situations involving contaminated products that pose environmental hazards. When products fail to meet stringent quality requirements, they pose risks to both consumers and the environment. In such cases, it becomes imperative to implement efficient and safe reverse logistics processes to handle these products appropriately. Efficient reverse logistics processes facilitate the transportation of non-compliant or contaminated products back to their place of manufacture for proper disposal or re-processing, involving careful handling, packaging, and transportation to prevent further contamination or environmental harm, while also tracking and documenting the entire process to ensure transparency and accountability. Moreover, reverse logistics plays a critical role in sustainable waste management by promoting the reuse, recycling, or safe disposal of returned products, aligning with the principles of the circular economy. Additionally, the implementation of reverse logistics in cases of product contamination helps protect brand reputation and consumer trust by demonstrating the organization's commitment to quality, safety, and environmental stewardship, thereby maintaining customer confidence and loyalty.

Research Design

Legal regulations play a pivotal role in driving the implementation of reverse logistics, particularly concerning the environmentally sound disposal of items. Prohibitions on the unscientific disposal of products, imposed by various environmental laws and regulations, compel businesses to establish robust reverse logistics processes. These processes are essential for ensuring compliance with legal requirements while safeguarding the environment and public health. By adhering to these regulations, businesses must establish efficient systems for the return and proper disposal of products deemed non-compliant or hazardous. This involves the development of structured protocols for handling, packaging, and transporting such items to designated disposal facilities or recycling centers. Moreover, businesses must ensure transparency and accountability throughout the reverse logistics chain by accurately documenting each step of the process. By doing so, they mitigate the risk of environmental contamination and potential legal liabilities associated with improper disposal practices. Additionally, proactive compliance with environmental laws through effective reverse logistics not only helps businesses avoid regulatory penalties but also enhances their reputation as environmentally responsible entities. This fosters trust among stakeholders and demonstrates a commitment to sustainable business practices, ultimately contributing to long-term business success and environmental stewardship.

This study used an experimental research design, more precisely a pre-test/post-test control group design. Two groups of SHS students will be chosen for this design: the experimental group, which consists of business students and will receive financial education, and the control group, which consists of non-business students and will not receive any financial education. Prior to and during the intervention, the financial literacy and spending patterns of both groups will be evaluated. The researcher then assesses the effect of financial education on the dependent variables (financial literacy and spending habits) by contrasting the changes in these two groups. When determining causation and separating the impacts of financial education on the variables of interest while accounting for other variables, this research design is very suitable.

Study Population

The group of people that a study attempts to analyze is known as the population (Eldredge et al., 2014). In this instance, students in their final year of study at public senior high schools (SHSs) in Takoradi, Ghana, comprise both business and non-business students. The study aims to investigate how financial education initiatives have impacted the spending habits and financial literacy of this particular demographic. The majority of SHS students are in the age range when having sound financial decision- making abilities is critical to their success in the future. In order to guarantee sample diversity, the study will focus on public SHS institutions located in the Takoradi metropolitan area.

Legal regulations play a pivotal role in driving the implementation of reverse logistics, particularly concerning the environmentally sound disposal of items. Prohibitions on the unscientific disposal of products, imposed by various environmental laws and regulations, compel businesses to establish robust reverse logistics processes. These processes are essential for ensuring

compliance with legal requirements while safeguarding the environment and public health. By adhering to these regulations, businesses must establish efficient systems for the return and proper disposal of products deemed non- compliant or hazardous. This involves the development of structured protocols for handling, packaging, and transporting such items to designated disposal facilities or recycling centers. Moreover, businesses must ensure transparency and accountability throughout the reverse logistics chain by accurately documenting each step of the process. By doing so, they mitigate the risk of environmental contamination and potential legal liabilities associated with improper disposal practices. Additionally, proactive compliance with environmental laws through effective reverse logistics not only helps businesses avoid regulatory penalties but also enhances their reputation as environmentally responsible entities. This fosters trust among stakeholders and demonstrates a commitment to sustainable business practices, ultimately contributing to long-term business success and environmental stewardship.

Sample size and Sampling Technique

Choosing a sample, or subset, from a broader population or dataset is a basic idea in statistics and research (Levy & Lemeshow, 2013). Drawing conclusions about the population from the sample's characteristics is the aim of sampling (Weinberg et al., 2014). Techniques for selecting this subset in a way that fairly represents the greater population are known as sampling techniques. The Yamane sample size calculation was applied to determine the sample size for this investigation. According to this formula,

N

$$n = \frac{}{1 + Ne^2}$$

Where:

n = Sample size required N = Total population size

e = Desired level of precision/error term = 5% or 0.05

$$n = \frac{800}{1 + 800(0.05)^2}$$

$$n = \frac{800}{1 + 2}$$

$$n = 266.67$$

$$n \approx 267.$$

Using the target population of 800 per the GES data on the selected SHS in Takoradi, the sample size gives **267** for the targeted population. Though there are several sampling techniques available to researchers, simple random sampling techniques were used to select one business school and one non-business school to participate in the study from the 2 SHS selected. Having selected these group of students, purposive sampling was used to select targeted individuals to partake in the study. The selection of sampling techniques for this study reflects a balanced approach aimed at both managing the large population size of 3 senior high schools in Takoradi and ensuring the depth of understanding necessary for the research objectives. By employing simple random sampling to choose 3 schools from the total pool, the study introduces an element of randomness that helps mitigate potential biases in school selection. This method also facilitates the creation of a representative sample of schools, allowing for a broad spectrum of perspectives and experiences within the Takoradi area to be included in the study. Furthermore, simple random sampling provides a practical means of narrowing down the scope of the study to a manageable size while still maintaining the potential for diverse insights.

Subsequently, the use of purposive sampling within the selected schools further enhances the study's ability to delve deeply into the financial literacy, financial education and spending habit of the students. This technique allows for the deliberate selection of individuals who possess the requisite knowledge, experiences, and perspectives related to the topic and potential gender differences in their financial literacy level. By handpicking participants based on these criteria, the study aims to gather rich but varied data that can offer valuable insights into the complexities of financial education, financial literacy and spending habit of the students. This dual approach of combining simple random sampling for school selection with purposive sampling for individual selection ensures both a representative sample from the population of Takoradi senior high schools and a focused exploration of the research questions at hand.

Data Collection Instrument

According to McCusker and Gunaydin (2015), data collecting instruments are devices or procedures used to obtain information, data, or proof from people or sources for study, analysis, evaluation, or any other purpose. These tools support the systematic and methodical collection, recording, and organization of data by researchers and data collectors. The target demographic, the type of data being gathered, and the research objectives all influence the choice of data gathering tool. Structured questionnaires were utilized in this study, while other common data collection tools include surveys, questionnaires, focus groups, exams and assessments, interview guides or procedures, observations, and so on.

The purpose of the questionnaire was to assess how financial education affected Takoradi SHS students' spending patterns and financial literacy. To collect quantitative data, these surveys included Likert scale items along with closed-ended questions. They were divided into parts that addressed spending patterns, financial literacy, demographics, and the perceived value of financial education. The financial literacy scale was taken from Wagner (2015) and the OECD (2017), while the questionnaire on spending habits and financial education was taken from Azmi and Ramakrishnan (2018). These three factors are measured using a likert scale from strongly disagree (1) to highly agree (5).

Sources of Data

Researchers gather information for their studies from primary or secondary sources. Since the researcher used a structured questionnaire to get new data from participants, the data used in this study were from primary sources. This data was strictly tailored based on the study objectives and has not been used previously for any other purpose. As a result, the researcher is the first user of the data collected on the study variables; financial education, financial literacy and spending habit of SHS students in Takoradi. Nonetheless, other information was downloaded from online sources and in literature to back up the primary data collected.

Data Collection Method

The data collection process involved several key steps, with a focus on implementing a random sampling method to ensure representative data from various strata. First and foremost, obtaining permission from the relevant school authorities was a pivotal initial step in the process. So, permission was sought and secured to conduct the study within each of the participating schools, allowing for the administration of the questionnaire to the students.

Before the questionnaire was administered, students were presented with an informed consent form, providing them with comprehensive information about the study's objectives and emphasizing the voluntary nature of their participation. It also underscored the strict confidentiality of their responses, ensuring that students were well-informed and comfortable with their involvement.

The questionnaire administration process was designed to adhere to the principles of random sampling. A representative sample of Senior High School students in Takoradi was systematically selected. The questionnaire was then distributed within each stratum, ensuring that the data collected accurately represented the diversity of schools and grade levels in Takoradi. This process was conducted both in person and through an online platform, allowing participants the flexibility to choose the method that best suited their preferences and circumstances.

Throughout the data collection phase, monitoring was conducted with precision. The researcher closely supervised the process to guarantee the accuracy and completeness of the responses. The monitoring served as a vital quality control measure, ensuring the reliability and integrity of the data collected.

Validity and Reliability of the Study

Instances of transit damage, particularly those involving leaking containers containing hazardous materials, underscore the importance of

effective reverse

logistics practices. When goods sustain damage during transportation, whether due to accidents, mishandling, or unforeseen circumstances, there is an urgent need for prompt action to mitigate potential environmental and safety risks. In such cases, the implementation of reverse logistics becomes essential to ensure the timely return of damaged goods to the manufacturer or designated facilities for proper handling and disposal. Effective reverse logistics processes involve the swift identification, containment, and transportation of damaged goods to prevent further leakage or contamination. This requires close coordination between logistics providers, manufacturers, and relevant authorities to ensure compliance with safety regulations and environmental standards. Moreover, robust reverse logistics protocols should include procedures for assessing the extent of damage, determining appropriate disposal methods, and documenting the entire process to facilitate transparency and accountability. By promptly addressing instances of transit damage through efficient reverse logistics, businesses can minimize the potential environmental impact and safety hazards associated with spills or leaks, thereby safeguarding public health and the environment. Additionally, proactive management of transit damage enhances customer satisfaction, preserves brand reputation, and reduces the financial losses incurred from product wastage or liability claims. Overall, the effective implementation of reverse logistics in response to transit damage plays a vital role in ensuring the integrity of supply chains, promoting environmental sustainability, and mitigating risks across the logistics network.

Data Analysis

Data analysis is the process of examining, cleaning, transforming, and interpreting data to discover meaningful patterns, insights, and conclusions (Wang & Hajli, 2017). It involves using various techniques and tools to make sense of data, identify trends, draw conclusions, and support decision-making. Data analysis is a critical step in research, business, and many other fields, as it helps turn raw data into valuable information for informed decision-making and problem-solving. Data analysis for this study was entirely quantitative in nature.

Collected data from the questionnaires were entered into and analyzed using the statistical package for social science software was used. The analysis involved descriptive statistics to summarize the data, inferential statistics to examine relationships and patterns, and regression analysis to determine the impact of the independent variable on the dependent variables. For this objective, the study employed frequencies and percentages of descriptive statistics to analyze the data. Data was collected to assess the financial knowledge level of SHS students in Takoradi, utilizing survey questions. Having analyzed the data, frequency tables were developed to illustrate the distribution of students across various categories of financial knowledge, including low, moderate, and high. Percentages to help provide a clear understanding of this distribution.

In the second objective, correlation and regression analyses were employed to assess relationships between the variables. Data was collected on students' financial education, financial literacy, and spending habits using survey questions or scales. Following data collection, a correlation analysis was conducted to examine the strength and direction of associations between these variables. The correlation analysis indicated whether any statistically significant relationships existed. Furthermore, regression analysis was utilized to understand how financial education and financial literacy predict students' spending habits, shedding light on which factors had a more pronounced influence.

To investigate gender differences in financial education and financial literacy among senior high school students, an independent t-tests was conducted. Data was collected for male and female students with the help of the survey questions used. The t-tests provided insights into variations in financial education and financial literacy between male and female students.

Ethical Considerations

Prior to the participation of SHS students in the study, informed consent was obtained from all participants. This process ensured that students were fully aware of the study's purpose, the nature of their involvement, and their rights as participants. They were also informed about the confidentiality of their responses, their ability to withdraw from the study at any time, and the potential implications of their participation. The researcher also took great care to protect the anonymity and confidentiality of participants by ensuring that any personal information collected from the students was kept anonymous. Data was coded in a way that prevented the identification of individual participants, thus safeguarding their privacy. This approach not only ensured the security of participants' sensitive information but also encouraged open and honest responses.

The research's commitment to ethical guidelines and data protection protocols was upheld through a structured process. Throughout the research, efforts were made to minimize any potential harm or discomfort to the students. This included using sensitive and appropriate language in survey instruments to avoid causing emotional distress. The researcher remained attentive to participants' well-being and offered support in case any emotional or psychological concerns arose. More so, the researcher worked to ensure that the research was conducted in a fair and unbiased manner. This included avoiding any form of discrimination or bias, treating all participants equally, and minimizing the influence of personal biases on data collection and analysis.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

The chapter present analysis and discussion of results obtained after analyzing data collected on financial knowledge, financial education, financial literacy and spending habit of SHS students.

Response rate

The sample size for the study is 267 and therefore, the researcher targeted 367 responses from participants. Upon issuing the questionnaire and receiving the questionnaire back, only 232 questionnaires were completely filled and suitable for analysis. Therefore, the researcher ended up using a sample size of 232 which represent a response rate of 86.9%. the sample size used in the computation and analysis is therefore, 232 business and non-business students.

Demographic Characteristics

Demographic characteristics of respondents after analyzing data collected is shown in Table 1.

Table 1: Demographic characteristics of respondents

Features	Description	Frequency	Percent
Age	<16	70	30.2
	16 – 19	145	62.5
	20 – 23	12	5.2
	24 – 27	5	2.2
Class	SHS 3	232	100
Gender	Male	85	36.6
	Female	147	63.4
Father's educational level	Primary	26	11.2
	Secondary	147	63.4
	Tertiary	59	25.4
Parents monthly income (in Ghc)	<1000	25	10.8
	1001-2000	98	42.2
	2001-3000	67	28.9
	3001-4999	30	12.9
	>5000	9	3.9
	Don't know	3	1.3

Source; Field data (2024)

The age distribution of the final year SHS students shows that the majority fall within the 16-19 age range, constituting 62.5% of the participants. Those below the age of 16 make up 30.2%, while only a small percentage falls within the 20-23 and 24-27 age categories, with 5.2% and 2.2%, respectively. This suggests that the study predominantly captures the perspectives of late adolescence, which is a crucial period for financial education and literacy development.

Investigating the class level of participants, it was disclosed that every individual (100%) who participated in the study is in his or her final year. Thus, there were no individual in first year or second year who participated in this study.

In terms of gender representation, the study exhibits higher proportion of female participants (63.4%) compared to male participants

(36.6%). This gender distribution could influence the study's findings, as spending habits and financial literacy might vary between genders.

Looking at the educational background of the participants' fathers, the majority have completed secondary education (63.4%), while 25.4% have attained tertiary education. A smaller percentage (11.2%) have fathers with only a primary education level. This distribution indicates a relatively diverse educational background among the fathers, which could impact the students' exposure to financial knowledge and practices within their households.

Examining the monthly income of the participants' parents, the data revealed that a significant portion of the families fall within the income range of Ghc1001-2000 (42.2%), followed by Ghc2001-3000 (28.9%). The distribution highlights a predominantly middle-income group within the sample. However, it is noteworthy that a considerable number of participants (10.8%) belong to families with a monthly income of less than Ghc1000, which could be a factor influencing their financial literacy and spending habits. The representation of families with incomes exceeding Ghc5000 is relatively low (3.9%), suggesting a minority with higher socio- economic status.

Correlation

Conducting a correlation matrix is necessary to assess the strength and direction of relationships between variables in a dataset. It provides a comprehensive overview of how different variables co-vary, allowing researchers to identify patterns, dependencies, or associations among the studied factors. In this study, the correlation matrix was computed to determine the strength and direction of the various variables examined. Details on the correlation matrix is shown in Table 4.2.

Table 2: Correlation matrix

		Financial knowledge	Financial education	Financial literacy	Financial literacy
1	Financial knowledge	1			
2	Financial education	.148*	1		
3	Financial literacy	-.080	.027	1	
4	Spending habits	.101	-.062	-.131*	1

*. Correlation is significant at the 0.05 level (2-tailed). Source; Field data (2024)

Products reaching their expiration date represent a significant driver for implementing reverse logistics processes. As products near their expiry, they pose risks to consumer health and safety if consumed beyond their recommended date. Therefore, efficient reverse logistics processes are essential to transport expired products back to the manufacturer or designated facilities for proper disposal or recycling. This ensures that expired products are not inadvertently used beyond their safe consumption period, thereby mitigating potential health risks and liabilities. Effective reverse logistics protocols involve timely identification and segregation of expired products from inventory, followed by proper handling, packaging, and transportation to prevent contamination or spoilage. Close collaboration between manufacturers, retailers, and logistics providers is necessary to streamline the reverse logistics chain and facilitate the return of expired products in a cost-effective and environmentally responsible manner. Furthermore, documenting the disposal or recycling of expired products is essential for regulatory compliance and accountability. By implementing efficient reverse logistics processes for expired products, businesses can uphold their commitment to consumer safety, minimize waste, and protect their brand reputation. Additionally, proactive management of expired inventory contributes to operational efficiency and sustainability by optimizing inventory turnover and reducing the risk of stock obsolescence. Overall, effective reverse logistics for expired products play a crucial role in ensuring product quality, safety, and compliance throughout the supply chain.

Financial knowledge level of SHS students

The study aimed to assess the financial knowledge level of senior high school (SHS) students in Takoradi, utilizing a Likert scale ranging from strongly disagree (1) to strongly agree (5). The mean scores, standard deviations, and decisions based on the composite scores are presented for each statement, providing insights into the participants' financial literacy.

Table 3: Financial knowledge level of SHS students

	Variables	Business Students		Non-Business Students	
		Mean	Std. Dev.	Mean	Std. Dev.
1	With the financial understanding I possess, I am able to recognize and strategize my financial objectives.	4.06	0.71	4.03	0.67
2	I am aware that it is essential to allocate funds for unexpected financial needs.	3.96	0.7	3.93	0.72
3	I understand the importance of having sufficient insurance coverage to safeguard myself, my family, and my financial assets.	3.97	0.77	3.9	0.76
4	I understand the importance of having sufficient insurance coverage to safeguard myself, my family, and my financial assets.	2.32	0.86	2.21	0.87
5	Due to the financial education, I increase the amount of my retirement contribution	2.11	0.68	1.85	0.76
6	Based on my financial understanding, I am capable of discovering methods to effectively manage or diminish my debt burden.	4.01	0.65	4	0.75
7	I know that an investment with a high return is likely to be high risk	4.29	0.56	4.03	0.97
8	I know that high inflation means that the cost of living is increasing rapidly	3.99	0.88	3.52	0.94
9	It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stock and shares.	3.24	0.97	3.52	0.86
	Composite scores	***3.55***	***0.75***	***3.44***	***0.81***

Source; Field data (2024)

Starting with the ability to identify and plan financial goals, both business and non-business students showed a relatively high level of agreement. Business students reported a mean score of 4.06, indicating a strong belief in their capability to set and plan for financial objectives. Similarly, non-business students were not far behind with a mean score of 4.03, suggesting a comparable confidence in their financial goal-setting abilities.

Moving on to emergency funds, both groups again demonstrated a solid understanding of the necessity to have money set aside for unexpected situations. Business students averaged a score of 3.96, while non-business students were slightly lower at 3.93. This indicates a generally shared understanding of the importance of financial preparedness among the surveyed students.

Concerning insurance and asset protection, the scores remained consistent with the trend seen in other categories. Both groups acknowledged the significance of having adequate insurance coverage, with business students scoring 3.97 and non-business students scoring 3.90. This suggests a relatively high level of awareness regarding the need for financial protection measures among the surveyed students.

However, when it comes to actions taken based on financial education, particularly regarding retirement planning, there is a notable difference between the two groups. Business students reported lower scores for both starting to contribute to a retirement plan (2.32) and increasing the amount of their contributions (2.11). On the other hand, non-business students also scored relatively low but slightly higher than business students in these areas, with scores of 2.21 and 1.85, respectively. This indicate that despite having financial knowledge, there are some hesitancies or barriers preventing students, especially business students, from actively engaging in retirement planning.

Moving to managing debt, both groups showed a strong belief in their ability to find ways to manage or reduce their debts. Business students reported a mean score of 4.01, and non-business students were close behind at 4.00, suggesting a shared confidence in their debt management skills.

When it comes to understanding investment risks and concepts, business students tended to show slightly higher levels of awareness. They scored 4.29 on the understanding that high returns are often associated with high risks, compared to 4.03 for non-business students. Similarly, they scored

3.99 on the understanding of high inflation's impact on the cost of living, while non-business students scored 3.52. This indicates that business students might have a better grasp of these financial principles compared to their non- business counterparts.

Finally, considering the composite scores, business students had a slightly higher average at 3.55 compared to non-business students at 3.44. This suggests that overall, business students in these selected SHS schools in Takoradi have a marginally stronger financial knowledge base than non-business students.

Relationship between students' financial education and financial literacy

The study aimed to examine the relationship between financial education and financial literacy among Senior High School students in Takoradi, focusing on both business and non-business students.

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 (Bus. Students)	.003[a]	.000	-.009	.24169
2 (Non. Bus Students)	.019[a]	.000	-.008	.22244

Source; Field data (2024)
a. Dependent Variable: Financial literacy
b. Predictors: (Constant), Financial education

Table 5: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1 (Bus. Students)	Regression	.000	1	.000	.001	.971[b]
	Residual	6.659	114	.058		
	Total	6.659	115			
2 (Non. Bus Students)	Regression	.002	1	.002	.040	.843[b]
	Residual	5.641	114	.049		
	Total	5.643	115			

Source; Field data (2024)
a. Dependent Variable: Financial literacy
b. Predictors: (Constant), Financial education

Table 6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1 (Bus. Students)	(Constant)	3.754	.256		14.682	.000
	Financial education	.003	.074	.003	.036	.971
2 (Non. Bus Students)	(Constant)	3.772	.250		15.071	.000
	Financial education	.014	.071	.019	.199	.843

Source; Field data (2024)
a. Dependent Variable: Financial literacy
b. Predictors: (Constant), Financial education

For business students, the model summary indicates an extremely low R-squared value of .000, suggesting that financial education explains essentially none of the variance in financial literacy among this group. The ANOVA results support this, with a non-significant F-value of 0.001 (p = 0.971). Looking at the coefficients, the beta value for financial education is 0.003, which is not statistically significant (t = 0.036, p = 0.971). In simpler terms, the presence or absence of financial education does not appear to have a meaningful impact on the financial literacy of business students in the selected SHS schools.

Similarly, for non-business students, the model summary shows an equally negligible R-squared value of 0.000, indicating that financial education does not explain any substantial portion of the variance in financial literacy among this group either. The ANOVA results confirm this lack of significance, with an F-value of 0.040 (p = 0.843). The coefficient analysis reveals a beta value for financial education of .019, which again is not statistically significant (t = 0.199, p = 0.843). In essence, the data suggests that the level of financial education received does not seem to be associated with the financial literacy levels of non-business students in these SHS schools in Takoradi.

Relationship between financial education and the spending habits

The study aimed to explore the relationship between financial education and the spending habits of Senior High School students in Takoradi, categorizing the students into business and non-business streams.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1 (Bus. Students)	.046[a]	.002	-.007	.25281
2 (Non. Bus Students)	.031[a]	.001	-.008	.25073

Source; Field data (2024)
a. Dependent Variable: spending habits
b. Predictors: (Constant), Financial education

Table 8: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1 (Bus Students)	Regression	.015	1	.015	.241	.625[b]
	Residual	7.286	114	.064		
	Total	7.301	115			
2 (Non. Bus Students)	Regression	.007	1	.007	.106	.745[b]
	Residual	7.166	114	.063		
	Total	7.173	115			

Source; Field data (2024)
a. Dependent Variable: spending habits
b. Predictors: (Constant), Financial education

Table 9: Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1 (Bus Students)	(Constant)	3.489	.267		13.046	.000
	Financial education	-.038	.077	-.046	-.491	.625
2 (Non. Bus Students)	(Constant)	3.046	.282		10.797	.000
	Financial education	.026	.079	.031	.326	.745

Source; Field data (2024)
a. Dependent Variable: spending habits
b. Predictors: (Constant), Financial education

Mistakes in order processing by suppliers can have significant consequences, such as the delivery of incorrect or unsatisfactory products to customers. In such cases, the implementation of reverse logistics becomes essential to rectify the error and uphold customer satisfaction. Reverse logistics facilitates the return of erroneously supplied products from customers to the manufacturer or supplier, enabling the correction of the mistake and the provision of the correct items. This involves establishing efficient processes for receiving returned products, verifying the nature of the error, and determining the appropriate course of action, whether it be replacement, refund, or exchange. Effective communication and coordination between the customer, supplier, and logistics providers are crucial to ensure seamless reverse logistics operations and timely resolution of the issue. By promptly addressing mistakes in order processing through reverse logistics, businesses demonstrate their commitment to customer service excellence and enhance customer satisfaction levels. Additionally, the efficient handling of product returns contributes to building trust and loyalty among customers, as they perceive the company's

responsiveness and willingness to rectify errors as a positive attribute. Furthermore, by incorporating feedback from reverse logistics processes, businesses can identify underlying causes of order processing errors and implement measures to prevent recurrence, thus improving overall operational efficiency and customer experience.

Gender difference in financial education and financial literacy

The study investigates whether or not there are differences in gender regarding SHS students' financial education and financial literacy. This was tested using independent t-test. The result on the gender differences between the two groups is shown in Table 10.

Table 10: Differences in financial education and financial literacy of SHS students

Variables	Gender	N	Mean	Std. Deviation	Sig.
Financial Education	Male	85	3.519	.329	.422
	Female	147	3.484	.285	
Financial literacy	Male	85	3.807	.233	.464
	Female	147	3.784	.232	

Source; Field data (2024)

Comparing the mean values of participants financial education with age, it was discovered that the mean score for male students is 3.519 with a standard deviation of 0.329, while female students have a slightly lower mean of 3.484 and a standard deviation of 0.285. The p-value of 0.422 suggests that the difference in mean scores for financial education between male and female students is not statistically significant. Moving on to financial literacy, the mean score for male students is 3.807 with a standard deviation of 0.233, and for female students, the mean is 3.784 with a standard deviation of 0.232.

Similarly, the p-value of 0.464 indicates that the difference in mean scores for financial literacy between male and female students is not statistically significant.

The result showed that there are only marginal gender differences in both financial education and financial literacy among senior high school students in Takoradi. The mean scores for both genders are relatively close, and the non-significant p-values suggest that any observed variations could be due to chance. These findings imply that, at least within the studied population, gender does not play a significant role in determining the levels of financial education and literacy among senior high school students.

Discussion of Findings

This situation may arise due to various reasons such as changes in customer preferences, upgrades, or evolving requirements. Efficient reverse logistics processes are essential to manage the return of the old products and provide customers with the desired replacements in a timely and satisfactory manner. The implementation of efficient reverse logistics protocols involves establishing clear procedures for accepting returned products, verifying their condition, and determining eligibility for exchange. This may include assessing factors such as the product's original condition, warranty status, and compliance with return policies. Additionally, effective communication channels and customer service support are vital to facilitate smooth exchanges. Customers should be provided with clear instructions on how to initiate the exchange process and should receive prompt assistance and guidance throughout the return and replacement process. Furthermore, close coordination between various stakeholders, including customers, retailers, and logistics providers, is essential to ensure the seamless flow of returned products and the timely delivery of replacements. This may involve optimizing transportation routes, managing inventory levels, and leveraging technology solutions to track and trace returned items. Moreover, businesses can use the exchange process as an opportunity to enhance customer satisfaction and loyalty by offering flexible exchange options, such as alternative products or store credits, and by ensuring hassle-free returns and replacements. By implementing efficient reverse logistics processes for customer exchanges, businesses can not only meet customer expectations but also improve operational efficiency, reduce costs associated with product returns, and strengthen customer relationships. Additionally, gathering insights from customer exchange transactions can help businesses identify trends and preferences, enabling them to tailor their product offerings and services to better meet customer needs in the future.

Financial knowledge level of SHS students

The finding regarding the financial knowledge level of Senior High School students in Takoradi implies a generally positive understanding of fundamental financial concepts among both business and non-business students. Specifically, it suggests that students, regardless of their academic focus, exhibit confidence in their ability to identify and plan financial goals, recognize the importance of emergency funds, understand the need for insurance and asset protection, and feel capable of managing debts. These aspects are crucial for their financial well-being and suggest a promising foundation for their future financial decisions. However, the finding also reveals a gap between knowledge and action, notably in the area of retirement planning. Despite understanding the importance of retirement savings, both groups of students reported hesitancy or barriers in actively engaging in such long-term financial strategies. This points towards a need for interventions that bridge this gap and translate knowledge into practical financial habits, especially regarding retirement planning, which is critical for long-term financial security.

This situation may arise due to various reasons such as changes in customer preferences, upgrades, or evolving requirements. Efficient reverse logistics processes are essential to manage the return of the old products and provide customers with the desired replacements in a timely and satisfactory manner. The implementation of efficient reverse logistics protocols involves establishing clear procedures for accepting returned products, verifying their condition, and determining eligibility for exchange. This may include assessing factors such as the product's original condition, warranty status, and compliance with return policies. Additionally, effective communication channels and customer service support are vital to facilitate smooth exchanges. Customers should be provided with clear instructions on how to initiate the exchange process and should receive prompt assistance and guidance throughout the return and replacement process. Furthermore, close coordination between various stakeholders, including customers, retailers, and logistics providers, is essential to ensure the seamless flow of returned products and the timely delivery of replacements. This may involve optimizing transportation routes, managing inventory levels, and leveraging technology solutions to track and trace returned items. Moreover, businesses can use the exchange process as an opportunity to enhance customer satisfaction and loyalty by offering flexible exchange options, such as alternative products or store credits, and by ensuring hassle-free returns and replacements. By implementing efficient reverse logistics processes for customer exchanges, businesses can not only meet customer expectations but also improve operational efficiency, reduce costs associated with product returns, and strengthen customer relationships. Additionally, gathering insights from customer exchange transactions can help businesses identify trends and preferences, enabling them to tailor their product offerings and services to better meet customer needs in the future.

Contrary to the positive findings, studies such as those by Drever et al. (2015) and Van Rooij et al. (2011) have shown a more mixed picture when it comes to young individuals' engagement in long-term financial planning. Drever et al. (2015) emphasized the challenges many individuals face in translating financial knowledge into concrete actions, particularly in areas like retirement planning. This aligns with the finding in the current study where both business and non-business students reported hesitancy or barriers in actively contributing to retirement plans. Additionally, Van Rooij et al. (2011) highlighted the tendency for young individuals to be overly optimistic about their debt management skills, sometimes underestimating the challenges they might face. This contrasts with the high confidence levels reported by both groups of students in managing debts, indicating a potential area of discrepancy.

From these it is noted that finding on the financial knowledge level of SHS students in Takoradi suggests a generally positive understanding of basic financial concepts among both business and non-business students. While they exhibit confidence in areas such as goal-setting, emergency funds, and debt management, there is a notable gap in translating this knowledge into action, particularly in retirement planning. Studies supporting these findings emphasize the importance of financial literacy and education in fostering positive financial behaviors. However, challenges and discrepancies exist, as highlighted by studies showing hesitancy towards long-term financial planning and potential overconfidence in debt management skills among young individuals

Relationship between students' financial education and financial literacy.

The finding regarding the relationship between financial education and financial literacy among Senior High School students in Takoradi presents a surprising and somewhat unexpected result. The study aimed to explore how financial education impacts the financial literacy of both business and non-business students, yet the analysis reveals an extremely low R-squared value for both groups, indicating that financial education explains essentially none of the variance in financial literacy among these students. For business students, it was discovered that the presence or absence of financial education does not have a meaningful impact on their financial literacy levels. This result is further supported by the non-significant ANOVA results, indicating that the relationship between financial education and financial literacy among business students is not statistically significant. The beta value for financial education is also non-significant, implying that the level of financial education received does not explain the variations in financial literacy observed among business students in the surveyed SHS schools.

Similarly, the findings for non-business students are equally surprising; with coefficient of determination value of 0.000 indicating that financial education does not explain a substantial portion of the variance in financial literacy among this group. The ANOVA results further confirm the lack of significance in the relationship between financial education and financial literacy among non-business students, with a non-significant F- value. The beta value for financial education is also not statistically significant, reinforcing the notion that the level of financial education received does not seem to be associated with the financial literacy levels of non-business students in the surveyed SHS schools. This finding is somewhat unexpected, as one might assume that exposure to financial education would lead to improved financial literacy among students. However, the results suggest that the financial education curriculum or programs in these SHS schools may not be effectively translating into improved financial knowledge and skills among students, both in the business and non-business tracks.

Studies by Bakar and Bakar (2020) have emphasized the importance of financial education in fostering positive financial behaviors among young individuals. However, the findings of this study contrast sharply with these views, indicating that the financial education provided to students in the surveyed SHS schools does not seem to be influencing their financial literacy levels significantly. Additionally, research by Lusardi (2019) has highlighted the positive impact of financial education on long-term financial planning behaviors, which is not reflected in the current study's results. On the other hand, studies such as those by Lusardi and Mitchell (2014) have also found limited impacts of financial education on financial behaviors, aligning more closely with the current findings. These studies suggest that the effectiveness of financial education programs can vary widely and may depend on various factors such as curriculum design, teaching methods, and the relevance of the content to students' lives.

The finding that financial education does not seem to be significantly associated with the financial literacy levels of both business and non-business students in the surveyed SHS schools in Takoradi raises questions about the effectiveness of the current financial education programs. It suggests a need for a reevaluation of these programs to ensure that they are designed and delivered in a way that translates into improved financial knowledge and skills among students.

Relationship between financial education and the spending habits

The finding on the relationship between financial education and the spending habits of Senior High School students in Takoradi reveals impact of financial education on the spending behaviors of both business and non-business students. The study aimed to explore whether the level of financial education received by students influenced how they managed their finances, yet the analysis indicates a very weak association between financial education and spending habits. For business students, the model summary suggests that only 0.2% of the variation in spending habits could be explained by financial education. This extremely low coefficient of determination value indicates that financial education does not have a substantial impact on the spending behaviors of business students in the selected SHS schools. Additionally, the adjusted R-squared value suggests that including financial education as a predictor did not improve the model's fit, further highlighting the lack of significance. The p-value for the predictor variable of Financial Education also indicate no statistically significant relationship between financial education and spending habits among business students.

Similarly, the results for non-business students present a similarly negligible impact of financial education on spending habits. The model produced coefficient of determination indicating that financial education explains just 0.1% of the variance in spending habits among non-business students. The adjusted R-squared value of -0.008 further reinforces the lack of significance in including financial education as a predictor variable. The p-value for the predictor variable of Financial Education once again indicate no statistically significant relationship between financial education and spending habits among non-business students. The regression analyses for both groups also support these findings, with coefficients for financial education very close to zero. Among non-business students, the coefficient was -0.038, and among business students, it was 0.026. These values indicate that financial education did not have a meaningful impact on the spending habits of either group, further confirming the lack of association between the two variables.

This finding is unexpected, as one might assume that exposure to financial education would lead to more responsible spending behaviors among students. However, the results suggest that the financial education programs in the surveyed SHS schools may not be effectively translating into improved spending habits among students, regardless of their academic focus. Studies by Hanson and Olson (2018) and Sconti (2022) have also found limited impacts of financial education on actual financial behaviors, aligning with the results of this study. These studies suggest that while financial education can improve financial knowledge and attitudes, its direct impact on behaviors such as spending habits may be minimal. On the other hand, research by Bakar and Bakar (2020) has emphasized the importance of financial education in fostering positive financial behaviors among young individuals. The contrasting findings of this study indicate that the effectiveness of financial education programs in influencing spending habits among SHS students may vary widely and could depend on various factors such as the content of the curriculum, teaching methods, and the relevance of the topics covered.

The finding that financial education does not seem to have a significant impact on the spending habits of both business and non-business students in selected SHS schools in Takoradi raises questions about the effectiveness of current financial education programs. It also showed that financial education and financial literacy among SHS students is low. It suggests a need for a reevaluation of these programs to ensure that they are designed and delivered in a way that translates into improved financial behaviors among SHS students.

Gender difference in financial education and financial literacy

Assessing the gender difference in financial education and financial literacy of SHS students, it was revealed that there is no statistically significant difference in financial education and literacy scores between male and female students. This outcome holds important implications for understanding the state of financial knowledge among senior high school students and challenges certain preconceived notions regarding gender disparities in financial aptitude.

The absence of a statistically significant difference suggests that, on average, both male and female students possess comparable levels of financial education and literacy. This implies that educational institutions in are successful in delivering financial education programs that cater to the needs of all students, irrespective of gender. The finding challenges traditional gender stereotypes that might imply one gender is more adept at financial matters than the other.

One possible interpretation of this outcome is that SHSs are providing equitable financial education opportunities to both genders. The lack of a significant gender difference indicates that educational institutions are effective in ensuring that both male and female students have access to similar resources and educational experiences in the realm of financial knowledge. Moreover, the study's findings challenge the idea that there might be inherent gender-based differences in financial aptitude or interest. The similarity in financial education and literacy scores suggests that any observed differences are likely influenced more by external factors, such as educational opportunities and societal expectations, rather than inherent gender disparities.

The implications of this finding extend to policymakers and educators. If a significant gender difference had been identified, it might have necessitated targeted interventions to address the specific needs of the underperforming gender. However, in the absence of such differences, the focus can shift towards maintaining and improving the overall quality of financial education for all students. It is essential to acknowledge that while the overall finding indicates no statistically significant difference, there may still be variations within the male and female groups.

The TPB and Cognitive Social Learning Theory both support the finding that there is no statistically significant difference in financial education and literacy scores between male and female senior high school students. According to TPB, individual behaviour is influenced by attitudes, subjective norms, and perceived behavioural control (Mahmoud, 2014). In the context of financial education, if both male and female students are exposed to similar educational opportunities and resources, their attitudes and perceived control over financial matters are likely to be comparable, leading to similar levels of financial education and literacy. Additionally, Cognitive Social Learning Theory, which emphasizes observational learning and modeling, suggests that individuals, regardless of gender, can acquire financial knowledge through exposure to similar educational experiences (Lu & Lee, 2016). The absence of a significant gender difference in financial education and literacy scores may indicate that both genders have access to comparable role models and learning environments, challenging the notion of inherent gender-based differences in financial aptitude. The two theories support the idea that the observed similarities are likely a result of equitable educational opportunities rather than inherent gender disparities in financial knowledge.

The findings of the study assessing gender differences in financial education and literacy among senior high school students, which indicate no statistically significant difference in financial education and literacy scores between male and female students, stand in contrast to the broader trends observed in the reviewed studies. Many studies, such as those conducted by Arellano et al. (2014), Mustapha and Jeyaram (2015), Lusardi and Mitchell (2014), Lee and Hanna (2014), Agnew and Cameron-Agnew (2015), and others, consistently report gender differences in financial knowledge, attitudes, and behaviour. These studies suggest that women generally exhibit lower levels of financial literacy and confidence in financial matters compared to men. Therefore, the specific high school study's findings challenge the prevailing trend observed in the broader literature, emphasizing that even if there is a gender difference regarding financial education and literacy, the difference is non-significant.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The chapter present summary of the study and draw conclusion based on it. It also spelt recommendations to policy and future researchers.

Summary

The purpose of the study is to assess the impact of financial education on financial literacy and spending habits of senior high school students. The measurable objectives include;

1. To examine the financial knowledge level of senior high school students in Takoradi
2. To determine the relationship between financial education and financial literacy of SHS students in Takoradi
3. To examine the relationship between financial education and spending habits of SHS students in Takoradi
4. To determine the gender difference in financial education and financial literacy of senior high school students in Takoradi

The study emphasizes the choice of a quantitative research approach with experimental design consisting of pre-test/post-test control group structure. The study population comprises final-year students in public SHS institutions in Takoradi. The sample size, determined through Yamane's sample size formula, is 232, selected using simple random blend with purposive sampling. The data collection instrument, a structured questionnaire, is designed to assess financial literacy, spending habits, and the perceived effectiveness of financial education. The data collection process involves obtaining permissions, ensuring informed consent, and implementing random sampling. The chapter also addresses the validity and reliability of the study through piloting and testing processes. Data analysis is described as entirely quantitative, involving descriptive statistics, regression analysis, and t-tests to examine various objectives, including financial knowledge levels, relationships between variables, and gender differences in financial education and literacy among SHS students.

Major findings showed that;

Both business and non-business SHS students in Takoradi demonstrate a solid understanding of basic financial concepts, including identifying and planning financial goals, understanding the importance of emergency funds, and recognizing insurance and asset protection. There is, however, a notable gap in translating this knowledge into action, particularly evident in the hesitancy or barriers students face in retirement planning.

Financial education among business students in Takoradi explains essentially none of the variance in financial literacy levels. Similarly, there is no significant relationship between financial education and financial literacy among business students. moreover, financial literacy levels for both business and non-business students remain largely unchanged despite exposure to financial education.

Financial education appears to have a minimal impact on the spending behaviors of SHS students in Takoradi. There is a weak association between financial education and students' spending habits, indicating no significant influence on how they manage their finances.

There is no significant gender difference in financial education and literacy levels among SHS students in Takoradi. Both male and female students show comparable levels of financial knowledge, suggesting equitable financial education opportunities across genders.

Conclusions

After assessing the impact of financial education on financial literacy and spending habit of SHS students in Takoradi, the study sheds light on the strengths and weaknesses of financial education programs among SHS students in Takoradi. While students demonstrate a solid understanding of basic financial concepts, there is a clear need for improvements in translating knowledge into practical financial habits, especially in areas like retirement planning. The lack of significant impacts of financial education on financial literacy and spending habits suggests the necessity for a reevaluation of current programs to ensure they effectively equip students with the skills needed for financial success. Additionally, the study highlights the success of educational institutions in providing equitable financial education opportunities across genders, challenging gender stereotypes in financial literacy. Overall, these findings provide valuable insights for policymakers, educators, and stakeholders in enhancing financial education programs for SHS students in Takoradi and beyond.

Recommendations

Based on the findings obtained, the following recommendations were made to policy and future researchers in order to reach a generalized conclusion on the impact of financial education on financial literacy and spending habits.

To policy

Policy makers should integrate financial literacy modules into teacher training programs to equip educators with the knowledge and skills to effectively teach financial concepts. This ensures that teachers can serve as effective facilitators of financial education in schools.

Policy makers should consider the cultural and socioeconomic context of students when designing financial education programs. Recognize that students from different backgrounds may have varying levels of exposure to financial concepts and tailor interventions accordingly.

Policymakers should consider mandating financial education as part of the standard curriculum in SHSs, ensuring that all students receive a foundational understanding of financial concepts.

For further studies

Future research should focus on developing and implementing financial education programs that emphasize practical application. This includes interactive workshops, simulations, or real-life case studies to help SHS students translate their financial knowledge into tangible actions.

Future researchers should explore the integration of behavioral economics and financial psychology into financial education programs. Understanding the psychological factors that influence financial decision-making can enhance the effectiveness of interventions aimed at improving financial behaviors.

Future researchers should conduct longitudinal studies to track the long-term effects of financial education on students' financial behaviors. This can provide valuable insights into whether financial education leads to lasting improvements in financial literacy and responsible financial management.

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APPENDIX

QUESTIONNAIRE

Dear Respondent,

My name is Bridget Ohenewaa Agyekum, and I am a final year student at the University of Cape Coast. Currently, I am conducting a research study on "The Impact of Financial Education on Financial Literacy and Spending Habits of SHS students in Takoradi." I am reaching out to request your permission to involve your students in the study by responding to the sets of questions on the topic.

The purpose of my study is to explore the relationship between financial education, financial literacy, and spending habits among senior high school students. By participating in this study, students will contribute valuable insights that can enhance our understanding of the impact of financial education on their financial knowledge and behaviours.

Participation in the study involves completing a questionnaire that will take approximately 15 to 20 minutes. The information collected will be kept confidential, and participants will remain anonymous in the research findings. The data gathered will only be used for academic purposes and will not be disclosed to any third parties.

I assure you that ethical considerations and privacy will be of the utmost importance throughout the research process. If you grant permission, I will coordinate with the school administration to facilitate a smooth and convenient process for administering the questionnaire. I kindly request your approval to proceed with the research within your institution.

Thank you for considering my request.

Section A: Demographic characteristics

1. Age

a). <16 [ ] b). 16 – 19 [ ] c). 20 – 23 [ ] d). 24 – 27 [ ]

e). 27+ [ ]

2. Indicate your class

a). SHS 1 [ ] SHS 2 [ ] SHS 3 [ ]

3. Gender

a). Male [ ] b). Female [ ]

4. Father's educational level

a). Primary [ ] b). Secondary [ ] c). Tertiary [ ]

5. Parents monthly income

a). ≤1000 [ ] b). 1001-2000 [ ] c). 2001-3000 [ ] d). 3001-4999 [ ] e). ≥5000 [ ] f). Don't know [ ]

Section B: Financial Knowledge Level

Kindly select from the sets of questions below the option that best describe your opinion on financial knowledge by agreeing or disagreeing to the statements below;

SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

	Statements	SD	D	N	A	SA

1	With the financial knowledge I had, I can identify and plan my financial goals					
2	I know that I have to ensure there is money set aside to cover emergencies					
3	I know that I have to ensure there is enough insurance to protect myself, my family and my financial assets					
4	Due to the financial education, I started contributing to the retirement plan					
5	Due to the financial education, I increase the amount of my retirement contribution					
6	With the financial knowledge I had, I can find ways to manage or reduce my debt					
7	I know that an investment with a high return is likely to be high risk					
8	I know that high inflation means that the cost of living is increasing rapidly					
9	It is usually possible to reduce the risk of investing in the stock market by buying a wide range of stock and shares.					

Section C: Financial Education

Kindly indicate your level of agreement with the following sets of questions describing financial education by ticking the option that best describe your opinion.
SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

	Statements	SD	D	N	A	SA
1	I can create and stick to a budget for my personal expenses					
2	I understand the concept of compound interest and how it affects savings and loans					
3	I am familiar with basic financial terms such as credit score, interest rate, and inflation					
4	I know how to distinguish between needs and wants when managing my finances					
5	I am aware of different types of financial investments, such as stocks, bonds, and mutual funds					
6	I can explain the importance of saving for short-term and long-term goals					
7	I understand the potential risks and benefits associated with using credit cards					
8	I know how to read and interpret a financial statement or bank statement					
9	I have a basic understanding of how taxes impact personal finances					

Section D: Financial Literacy

Kindly indicate your level of agreement with the following sets of questions describing financial literacy by ticking the option that best describe your opinion.
SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree

	Statements	SD	D	N	A	SA
1	It is important to be able to manage my money					
2	It is necessary for students to budget their finances for their future					
3	I can decide independently what to spend my money on					
4	I need to ask my parents for permission before I spend any money on my own					
5	I can spend small amounts of my money independently, but for larger amounts I need to ask my parents or guardians for permission					
6	I am responsible for my own money matters (e.g. for preventing theft)					
7	I am capable of making money transfer (e.g. paying a bill)					
8	I have a good understanding of bank statements					
9	I have a good understanding of sales contract					
10	I am capable of keeping track of my account balance					
11	I am capable of planning my spending with consideration of my current financial situation					

Section E: Spending Habits

Kindly select the option that best describe your spending habit by agreeing or disagreeing to each of the statements below.

SD=Strongly Disagree, D=Disagree, N=Neutral A=Agree

SA=Strongly Agree

	Statements	SD	D	N	A	SA
1	Before I buy something I carefully consider whether I can afford it					
2	I tend to live for today and let tomorrow take care of itself					
3	I find it more satisfying to spend money than to save it for the long term					
4	I am prepared to risk some of my own money when saving or making an investment					
5	I keep a close personal watch on my financial affairs					
6	I set long term financial goals and strive to achieve them					
7	I have too much debt right now and had to cut living expenses					
8	I have a weekly or monthly financial budget that I follow					
9	I usually set money aside for saving					
10	I don’t care because money is there to be spent					

END OF THE QUESTIONNAIRE!!