AN ANALYSIS OF PERSONAL FINANCIAL LITERACY AMONG COCOA FARMERS IN GHANA

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DECLARATION

I George Osei Akoto hereby declare that this thesis is my own work toward the award of the Executive Masters in Business Administration Degree and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgments has been made in the text.

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DEDICATION

This thesis is dedicated to my beloved wife Eugenia Osei Akoto (Mrs) and the entire family.

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LIST OF ABBREVIATIONS

PACFL	-	President's Advisory Council on Financial Literacy
GAO	-	Government Accountability Office
NCEE	-	National Council on Economic Education

ABSTRACT

Many cocoa farmers do not have any idea as to how much time is required for any type of financial services and issues related to the use of money. This study is a quantitative study which analyses personal financial literacy among cocoa farmers in Ghana. The study looks at the evidence of personal finance literacy among cocoa farmers in the Central Region of Ghana, why some cocoa farmers are relatively more knowledgeable than others as well as how a cocoa farmer's financial knowledge influences his/her opinions and decisions on personal financial issues. The farmers were randomly selected from Assin Foso and Twifo Praso districts of the Central region. The total questionnaires sent out was 677 out of which 569 responded. From a survey of 569 cocoa farmers, the results show that the farmers have lower levels of financial knowledge. It is also evident that geographical location, age as well as the education levels of farmers significantly affects their level of financial knowledge. As a result, this study provides the following recommendations towards improving financial literacy among cocoa farmers as rural outreach, incorporating financial literacy into educational system and the establishment of financial literacy information sharing group.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial knowledge and its application, reduces the rate and possibility that consumers at any income level, will be persuaded to buy goods and services that does not serve their interests by unethical sales people (Atia, 2012). Research has shown that the financial behavior of most people is impacted by their financial literacy. According to Lusardi and Tufano (2009), most people in debt are usually low in terms of financial knowledge. That is, without proper financial literacy, citizens run into debts. A study by Van Rooij, Lusardi and Alessie (2007) has revealed that individuals who do not have much financial literacy are less likely to participate in indirect financial investments (Atakora, 2013).

In recent years, a lot of attention has been given to the subject of financial literacy in widespread financial institutions, such as government organizations, consumer and public awareness groups, and other administrations among others (Braunstein and Welch, 2002). The complex nature of financial products and the awareness on the part of the individual to take responsibility for their financial security have raised the interest shown in financial education (Hilgert and Hogarth, 2003). According to Braunstein and Welch (2002), consumers who have better financial education and have adequate financial information take good decisions that increase their social as well as economic well-being. Moreover, families that are secured financially are better positioned to make vital contributions to the economic development of their communities.

Noctor et al., (1992), define financial literacy as the individual's capability to make complete verdicts and to take pronouncements that are effective with regards to the use and management of his money. Schaen and Lines (1996) suggest that a person who is financially literate enjoys a range of attributes such as a key understanding of the concepts which are important in money management; a fair knowledge of financial institutions, services and systems; a variety of analytical and synthetically skills, both general and specific; and attributes which allow for responsible and effective management of one's financial affairs (Oppong-Boakye and Kansanba, 2013).

To live a healthy, happy and prosperous life, the individual need to avoid as well as solve financial challenges and problems. Being financially literate is important in achieving these objectives. Social problems such as divorces, mental illnesses, prostitution, suicide and a variety of other undesirable social experiences are often as a result of financial problems (Kinnunen and Pulkkinen, 1998; Yeung and Hofferth, 1998; Cleek and Pearson, 1985). Moreover, Wolcott and Hughes (1999) argue that depression, low self-esteem, emotional stress and isolation can be increased by instances of financial hardships. This in turn can lead to tension in marriages which may lead to divorce.

In a study by Hilgert, Hogarth and Beverly (2003) on consumer finances to show how financial knowledge is related to financial behavior, questions on financial behavior and financial literacy are part of the questionnaires. Based on the responses, they form a Financial Practices Index which was based on the individuals' behavior in four variables: how he manages his cash-flow, how he manages credit, savings, and what he invests in. The outcome of the financial literacy quiz suggest that individuals with higher financial knowledge obtain the higher score marks when we compare the result of the index score by individual marks in the financial literacy quiz. This drew a relationship between financial knowledge and financial behaviour.

Further, another study by Van Rooij, Lusardi, and Alessie (2007) intimate that individuals who have low financial education are more probable to be influenced in their financial decisions by the financial intelligence from family, friends and other relatives and are less probable, compared to others, to invest in stocks. Mandell (2008) establish that individuals (high seniors school in his study) with an advanced financial literacy scores, as compared to others, who are less knowledgeable in financial education are less to bounce a cheque and more likely to have their cheque balance in their books.

Governments all over the world are increasingly advising residents in their country to be well informed in the planning of their retirement income instead of living with normal public pension scheme (Beal and Delpachitra, 2003). However, citizens including cocoa farmers show be well knowledgeable around their own financial future (Abetz, 2005). Against this backdrop, the study seeks to analyse personal financial literacy among cocoa farmers in Ghana.

1.2 Statement of Problem

Do cocoa farmers have a good command of personal finance and investments? Past studies have shown that rural dwellers exhibits lowest level of financial knowledge. Cocoa farmers in Ghana are not an exception. Most of these cocoa farmers do not have any idea as to how much time is required for any type of financial services and issues related to the use of money. Ironically, financial practitioners and professional bodies do not find interest in educating them. Those who are financially literate acquired them from their parents (Dahlia et al., 2011; Lusardi et al., 2010). However, training by professional bodies to learn new habits, refined skills and useful knowledge is of critical importance to improve in this direction. In Ghana, the economy changes immediately cocoa seasons started, but the core players (cocoa farmers) in the industry seem to be the poor among the citizenry in the country. Almost all new Ghanaian currency comes out during cocoa season but cocoa farmers complain about financial difficulties. Research undertaken by the Ministry of Finance over the past years suggests that Ghanaians do not have adequate financial knowledge and skills and are therefore not able to make good judgments about their financial decisions on the management of their finances as well as understanding details of financial services and products (Atakora 2013). However, a specific study on financial literacy among cocoa farmers is justified.

Based on this national canker, National Financial Literacy Week was introduced in 2007 to create the awareness and bring citizens intention to the variety of services and products being offered by financial institutions (Atakora, 2013). This awareness has brought to the attention of many people in the country to pursue knowledge regarding to the financial literacy. Up to date, research has shown that the problem still persists (Atakora, 2013). An interdisciplinary understanding of investment decision behavior and financial literacy is therefore appropriate as most developing nations like Ghana focuses their attention to new development as a reform to phase out the nation canker of financial crises in this era.

Cocoa farmers have to overcome many challenges in the country in order to attain financial freedom. It takes a lot more than just selling cocoa products to feed themselves and their families successfully. However, this study is relevant to ascertain evidence of financial literacy among cocoa farmers.

1.3 Research Objective

The primary objective of the study is to analyse personal financial literacy among cocoa farmers in Ghana. The study sought to achieve the following specific objectives:

1. To provide evidence of personal finance literacy among cocoa farmers in the Central Region of Ghana.
2. To examine why some cocoa farmers are relatively more knowledgeable than others.

3. To examine how cocoa farmer's financial knowledge influences his/her opinions and decisions on personal financial issues

1.4 Research Questions

Focusing to the above research objectives, three specific research questions are articulated:

1. What is the evidence of personal finance literacy among cocoa farmers in the Central Region of Ghana?
2. Why are some cocoa farmers relatively more knowledgeable than others?
3. How does a cocoa farmer’s knowledge influence his/her opinions and decisions on personal financial issues?

1.5 Methodology

This study adopts the quantitative approach. The study incorporates methods of collection and analysis of data in a quantitative way. The main objective of the researcher for using this approach is to draw on the strengths of the quantitative research approach and minimize its weaknesses. This study combines the case study and exploratory designs. In light of the exploratory nature, it seeks to add more insight into current understanding of financial literacy in Ghana as it focuses on cocoa farmers in Ghana specifically famers in the Central Region. The population of the study comprises Central Regional Cocoa Farmers in Ghana. The researcher also adopts the stratified technique and simple random sampling technique from the strata in selecting the samples for the study. In order to achieve the objectives of this study, paper based questionnaires and interview guides are the primary data collection instruments. Moreover, secondary data will be collected from reliable internet sources. Data that is not interpreted and analysed conveys little or no meaning to end users (Kothari, 2004). This study is a combination of exploratory and descriptive data analysis. The exploratory data analysis approach emphasizes on the use of diagrams to understand the data (Saunders, 2009) while the descriptive statistics enables the researcher to describe (and compare) variable numerically. Statistical Package for Social Sciences (SPSS) computer software is the data processing tool for this study.

1.6 Scope and Limitations of the study

To achieve the primary objective as well as the specific objectives of this study, the study focuses on cocoa farmers in the Central Region as the main geographical scope in terms of data collection. Thematically, the study also focuses on the concept of financial literacy and other relevant topics that are academically and theoretically related to this study.

However, the study is also subject to some limitations which the researcher cannot control in the research environment. Every research has its limit no matter how well it is conducted and constructed. With regards to this study, the researcher expects some factors to affect its outcome. One major limitation the researcher anticipates is that, there will not be enough sources of literature for the specific topic being researched. This can be attributed to the wide knowledge gap on the topic to be researched in Ghana. Access to the respondents, that is, the cocoa farmers will pose another challenge for this study. Their busy schedules may pose a daunting challenge in accessing reliable and in-depth knowledge from them. The issue of illiteracy among the farmers may also pose a challenge since the farmers may not be able to perceive the intent and purpose of the research and the researcher may need to devote more time to enlighten them.

Moreover, some of the respondents may feel compelled to give "socially acceptable answers" to questions asked and this may eventually affect the validity and reliability of the research results. Lastly, the researcher may be constrained by time in conducting a comprehensive research.

1.7 Justification of the study

The justification of this research work is how important financial education role plays in Ghana. Since the introduction and continuous implementation of financial products in Ghana in the 1990s, there is a need to have some evidence of financial literacy among cocoa farmers. It is in the light of the above that a study of this nature seeks to analyse financial literacy to provide evidence of how it affect farmers' financial decisions. The final report of this study would provide stakeholders in the finance industry with vital information that will enhance decision making and policy directions. Academically, this study will serve as a source of reference to enhance research in this field since it provides a rich source of literature.

1.8 Organisation of the Study

The research study is organized into five chapters. Chapter one, looks at the general overview which includes introduction and the background of the study, the study's problem statement, the primary and specific objectives, the research questions, the research methodology, its scope, justification, organization and its limitations.

Chapter two looks at the literature review which will discuss the works of other researchers that are related to this study.

Chapter three discusses the methods and procedures the researcher used in achieving the objectives of the study.

Chapter four looks at how the data collected from the field is processed and analysed based on the objectives and research questions of the research.

Chapter five summarizes the research findings, conclusions and suggests recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

To be able to make an accurate comparison and establish a consistent idea about what financial literacy is, there is the need to define certain key concepts. Different authors, however, have different definitions for the term financial literacy (Hung et al, 2009). This section looks at the existing theoretical and working definitions for the term, makes a comparison with other related but different theories and ends with a discussion of the areas in which financial literacy applies.

The literature will look at three fundamental terms. These are financial education, financial capability and financial literacy. These terms have overlaps in meaning and function which most often causes some level of confusion among consumers. (Cohen & Nelson, 2011). There are differences, however, among these terms but they all seek, wholly or in part, towards the objective of financial inclusion. According to Cohen & Nelson (2011), the term financial literacy is concerned with the consumer who is responsible for informing himself of financial products he purchases and his understanding of the terms and conditions applicable. It incorporates knowledge, skills and attitudes (Cohen, 2010). Financial capability, on the other hand, focuses on the financial services sector and its ability and responsibility to offer the right products in different target markets as per the requirements of these markets (Cohen & Nelson, 2011). The situation where consumers who have acquired the requisite financial knowledge have the opportunity to apply this knowledge in the financial market place to assess the appropriate financial products is known as financial inclusion. This is a demand and supply function. The three terminologies, i.e. financial education, financial capability and financial literacy are given further explanations below.

2.1. Financial Education

This is the process whereby the individual builds up a set of skills, attitudes and knowledge to be financially literate. Financial education gives people an introduction to the concept of money management such as savings, investing, spending, earning and borrowing. Financial education helps people to make decisions which are proactive but not reactive which helps them to make salient financial decisions to achieve their goals. Financial education builds and promotes a set of skills, attitudes and behaviours in using financial services and products and making effective use of rare financial assets. Financial education, therefore, is a means in achieving financial literacy whereas financial literacy is important for effective consumer protection.

2.2 Financial Capability

Financial capability looks at the “use factor” – that is the individual’s capability and opportunity to make use of the skills and knowledge implied and acquired in financial education. It is the concept that connects the financial system to the individual. Institutionally, financial capability presumes that individuals who have financial knowledge are able to assess financial services which are user–friendly and caters for the low–income consumer with suitable services and products.

Building financial capability, which is the mixture of attitudes, knowledge and skills with the prospects of applying them, therefore, needs the involvement of various sources which includes those that are geared towards educating the customer and those geared towards selling the products. This means that the individual is not entirely responsible for making all the decisions with regards to the financial tools and strategies that he uses. The argument here is that it is a two dimensional concept in building financial capabilities: on one hand, consumers have a duty of educating themselves about the financial services and products that they purchase. On the other hand, financial service providers also have a duty to study and understand the market, design a variety of affordable and appropriate products such as insurance products, payment services, credit and savings accounts and the provision of the avenues and systems to receive and possibly send remittances cheaply. Financial institutions, therefore, need to 'get into the minds' of their customers. That is to say, they need to be able to determine the needs of the clients and design appropriate products to meet those needs on the clients terms and not necessarily the institution's terms. This has to be done in an environment of transparency that will expedite the clients' ability to make decisions and also authenticate the expectations about what the consumer do or do not understand about their services or products.

2.3 Financial literacy

The President's Advisory Council on Financial Literacy (PACFL) of United States of America defined financial literacy to be the individual's capability to make use of his skill and knowledge to effectively manage their resources for their financial well-being throughout their lifetime.

Definitions for financial literacy differ in context as well as in source (Hung et al, 2009). Most of these definitions originate from developed countries where the concept is much more developed than in developing countries. The basis, however, is having the skills and knowledge in making informed financial decisions. The U.S. Government Accountability Office (GAO) defined financial literacy broadly as: "The ability to make informed judgments and to take effective actions regarding the current and future use and management of money. It includes the ability to understand financial choices, plan for the future, spend wisely, and manage the challenges associated with life events such as a job loss, saving for retirement, or paying for a child's education."

It should be noted however, that different people perceive and define financial literacy differently. Whereas people in the developed world would perceive financial literacy as their knowledge of complex financial instrument and products such as derivatives, bonds, stocks, tax codes, use of credit cards and insurance requirement, for those in the developing world the concept may be defined by their knowledge in basic secure saving, borrowing wisely and budgeting. Going by the literature, the definitions of financial literacy encompasses the following:

i. That financial literacy is a specific type of knowledge,
ii. An individual needs to have certain skills and ability to make use of the knowledge,
iii. The individual have to behave in a financially sound manner,
iv. The individual's financial experiences count and add up to the body of acquired knowledge.

Following is a list of conceptual definitions which have been selected from the works of prominent researchers and experts on financial literacy. The basis of these definitions is the individual's knowledge or understanding of financial literacy. Other definitions look at just how familiar the individual is with the concept. Moreover, other definitions such as those given by Mandell (2007) and Lusardi and Tufano (2009), also take into consideration the individual's ability to make good financial decisions and judgments. However, Lusardi and Tufano also focus on another important form of financial literacy which they called debt literacy. Moore (2003) also includes the concept of practical financial experience in his definition, arguing that, the experience forms the basis of any financial knowledge and skills acquired by the individual.

2.4 Conceptual Definitions of Financial Literacy

According to Hilgert, Hogarth, & Beverley (2003) financial literacy is "financial knowledge".

FINRA (2003) defines financial literacy as "The understanding ordinary investors have of market principles, instruments, organizations and regulations" (p. 2).

Moore (2003) defines financial literacy as "Individuals are considered financially literate if they are competent and can demonstrate they have used knowledge they have learned. Financial literacy cannot be measured directly so proxies must be used. Literacy is obtained through practical experience and active integration of knowledge. As people become more literate they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent" (p. 29). The National Council on Economic Education (NCEE) (2005) defines as "Familiarity with basic economic principles, knowledge about the U.S. economy, and understanding of some key economic terms" (p. 3). Moreover, Mandell (2007) also defines financial literacy as "the ability to evaluate the new and complex financial instruments and make informed judgments in both choice of instruments and extent of use that would be in their own best long-run interests". Lusardi and Mitchell (2007c) further define financial literacy as familiarity with "the most basic economic concepts needed to make sensible saving and investment decisions". Moving forward, Lusardi and Tufano (2009) also define financial literacy as a focus on debt literacy. Thus, a component of financial literacy which is defined as "the ability to make simple decisions regarding debt contracts, in particular how one applies basic knowledge about interest compounding, measured in the context of everyday financial choices". Furthermore, ANZ Bank (2008) also defines financial literacy as "The ability to make informed judgements and to take effective decisions regarding the use and management of money". Finally, Lusardi (2008a, 2008b) defines as "Knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real values, and the basics of risk diversification" (p. 2).

2.5 Elements of financial literacy

Topic such as budgeting, savings, record keeping and personal finance as used in financial literacy are considered more important to individuals in the lower-income brackets. According to Rhine and Comeau, (2000), this seems to suggest that the focus of financial educators should be two-fold: how to save and also why it's important to save. In this research, in measuring the financial literacy of the sample, i.e. cocoa farmers, the researcher used four variables.

2.5.1 Record Keeping

Record keeping is a basic skill that every person involved in some level of business must have. Records have the important function of being a ready source of assessing vital information which could be essential to the decision making process and also help to reduce risks significantly. The notion of using effective record keeping in measuring financial literacy is important since assessing readily available information is considered crucial to business operations and since business owners cannot depend on their memory for an accurate version of all the business transactions

2.5.2 Savings

Savings as a component of financial literacy serves two purposes

i. A source of economic security (Braunstein and Welch, 2002) and;
ii. The accumulation of wealth (Gokhale, 2000) to improve the individual's standard of living.

However, the saving culture needs discipline and the individual’s willingness to save – two important ethics which are missing from micro entrepreneurs (Karides, 2005).

2.5.3 Financing

Financing is the individual’s ability to source for funds from sources other than his own with the minimum of cost and payoff requirements. This is one area of critical interest since most micro entrepreneurs have been found to be uneducated with respect to business financing (Assibey, 2010). The fortunes of a business will decline and possibly collapse if the entrepreneur fails to acknowledge his mounting obligations of increased interests and debts as a result of increasing borrowings (Worthington, 2004).

2.5.4 Budgeting

Budgeting looks at the expenditure planning and pattern and the cash flow analysis of any business (Uddin, Chowdhury and Zakir, 2009) and this is very vital for the success of any business venture. However, it is well documented that micro entrepreneurs and business owners care little about budgeting; their primary concern is the cash flowing into the business and not their expenditure levels (Torres, 2008).

2.6 Critical Success Factors of financial literacy programs

There have been several arguments to support the promulgation of financial education. One of the most exciting arguments, no doubt, has been the enthusiastic reaction of learners. People across all genders, age groups and geographical locations have been grateful and happy to undergo such a learning experience and are optimistic of managing their financial affairs. This section of the literature discusses the elements of financial literacy.

2.6.1 Skilled Facilitator

A facilitator who is skilled in financial literacy is important for a training to be efficient, effective and appealing (Giuffrida 2000). In the literature, a facilitator is an expert who guides an individual through the learning process and also acts as an animator. Giuffrida, (2000) enumerates their duties as follows:

- They develop training content that reflects the learning need and style of learners.
- They provide the evidence for the learner to discuss, think and do the learning process.
- Asks questions that provokes the intellectual abilities of learners and guide them in finding solutions to these questions.
- Delivers additional information that is relevant to the learning process.
- Creates and maintains an environment that is conducive for the learning process and ensures the effective participation of all learners.
- Serves as a source of effective feedback to the learners.
- Creates a balance between the learner's contributions and the facilitators teaching time.
- Looks out for themes that are common to the learners and brings the learners contributions into context.

2.6.2 A well planned training tied to behavioral (Participant) objective with a focus on application

Adult learners want definite resolutions to their problems since they have little time. This is a direct principle of adult learning. That is, adults want to be doing or know something within a specified time period and they expect to receive immense benefits from those activities for themselves and for their families. Adults therefore view training sessions that are poorly planned as a sign of disrespect to them. For a training session to be effective, the behavioral and development objective of the participant must be identified. These behavioral objectives must state in detailed terms the knowledge to be gained (cognitive), the change in actions as a result of the training (psychomotor) and how the participants have a change in their emotions (affective) after the training session.

The behavioral objectives of any learning session look at detailed behaviors that can be observed or measured in its performance with the learning process. These objectives are taken from the learning’s perspective and do not necessary look at how the information is relayed. It is these behavioral objectives that inform the content of any training session.

2.6.3 Content Relevant to Audience

The requirement of the target audience determines the content and structure of a financial literacy programme. A needs assessment aimed at the target group preceding the development of the programme needs to be carried out. In situations where an existing programme content is being used, there is still the need to ensure that certain features are added to address the specific needs of the particular audience being targeted. Content and structure relevance will go a long way in keeping the audience active in the training sessions and in recommending the training sessions to others.

2.6.4 Training that Balances the Diverse Realities of Multiple Learners

Designing a training session for adults of diverse backgrounds is a challenging task for any facilitator. However, it should also be noted that the opportunity exists for an exciting training session where great ideas are shared as a result of the diversity of the participants.

Within the sample of this study i.e. cocoa farmers in the central region of Ghana, are people with as much diversity as education, religion, age, ethnic groups, gender, and stages in the family life cycle, household income levels and experiences. Therefore, different teaching styles should be adopted to suit all the categories of people in the group. For example, in situations where using the English language will impede the understanding of what is being taught, another language which is understood by the participants could be used. It should be noted that the audience will have participants with different levels of (i) Literacy and numeracy; (ii) Formal education and (iii) Experience in financial matters.

It should be noted that all the stated factors as well as others such as the psychological makeup of the individuals in the audience will have an effect on how the training session is designed and subsequently delivered. Some basic guidelines for designing training content for participants with diverse backgrounds are:

i. A lot of illustrations should be used. The language used should also be plain, simple and concise,
ii. As much as possible, the facilitator should use examples that are localized and may have experienced,
iii. The educational level of the participants should be taken into consideration and appropriate numeracy/literacy levels should be considered in delivering training materials.
iv. All new and unfamiliar terms or concepts should be clearly defined and explained.
v. The learning styles and training methods should be varied regularly so as to keep its appeal and interest.

2.6.5 An Adult-Oriented and Accessible Location

To make financial literacy programmes early accessible, they should be held in locations that participants can access without any difficulty. The following criteria will help in choosing an accessible location:

i. The facility chosen to be used must be oriented towards adults. It should be noted that most adults have a negative experience in schools and therefore elementary and high schools will not be an appropriate locations for adult classes. Most adults do not like the 'school' feeling and will not like their training sessions to be held in schools especially if most of them don't have formal education and may therefore feel intimidated by such presence. Moreover, the type of furniture used in the school seating which are meant for youth, will not be appropriate for adults.
ii. People with disabilities should also be taken into consideration and appropriate locations chosen to cater for their needs.
iii. The location should be easily accessible by public transport.
iv. The locations should possibly have a childcare center to cater for nursing mothers or a caretaker could be employed for that purpose.
v. The training space should be spacious enough to allow for small group discussions and group work.
vi. The training space should be clean, neat and pleasant with enough aeration or air-conditioning.

Most often, adult learners use the training locations as an indicator of how the facilitators view them. To them, a well-organized, neat and confortable space or location shows the level of respect accorded them by the facilitator. The reverse is true and this, to a large extent, affects their possible attitudes and reception to the facilitator and the training contents.

However, in situations where it is difficult to bring all the target market to one location because of geographical dispersion, the facilitator may hold different training sessions in different location during a calendar year.

2.6.6 A training schedule that is respectful of the needs of your audience

Since most adults are professionals and have different work schedules, finding a convenient time for a financial literacy training course can be challenging. Most often than not, evening and weekends present the best opportunities for holding these training sessions since most adults are off work during these times. It must however, be noted that, most adults prefer to spend time with their families at these times.

Therefore, the best thing to do in determining a schedule for the training session is to ask the potential participants and to possibly choose the time appropriate for the majority of them. Other scheduling features e.g. holding sessions once a week, forth night etc. and the time of the year should also be considered.

2.6.7 Training that includes evaluation

Evaluation looks at measuring the outcomes of the training session. It assesses the performance of the facilitator, staff, invited guest speaker(s) and the participants themselves. It seeks to have a feedback on the content and the processes used in the training session. This gives the opportunity to the participants to make contributions through their experiences to future training sessions.

2.7 Determinants of financial literacy

The financial services sector has become highly complex and specialized and consumers who are desirous of managing their finances effectively need to constantly keep up with the activities of the sector. The advent of new technology has increased competition market innovation and the sophisticated tastes and preferences of consumers have led to the creation of a wide range of financial products and services. This requires that consumers need a broad spectrum of financial knowledge to be able to actively participate in the financial market. This section will discuss the factors that determine the level of financial knowledge such as gender, age, and educational level, and profession, level of wealth, geographical location and ethnic background.

2.7.1 Age

Most researches conducted have established age to be an essential determinant of an individual's knowledge in financial literacy. Worthinton (2004) finds that among Australians, those aged between 50 to 60 years are less likely to be financially literate. In Sweden, Almenberg and Säve-Söderbergh (2011) find that people between 35 to 50 years have the highest level of financial literacy while those older 65 had the least. Most Americans, those aged 51 to 56 are the least literate, financially (Lusardi and Mitchell 2006). Cole et al. (2008) also finds a similar relationship in India and Pakistan. In their studies, age had a non-linear effect on financial literacy and peaks at age 40 in India and age 45 in Pakistan.

2.7.2 Gender

On the issue of gender, most researchers have find out that men score better on various financial literacy test (Mandell, 2008; Cole et al., 2008), Worthington (2004), Chen and Volpe (1998), Lusardi and Mitchell (2006, 2008), Almenberg and Säve-Söderbergh (2011), Monticone (2010), Volpe et. al. (1996), Goldsmith and Goldsmith (1997). Almenberg and Säve-Söderbergh (2011) explain that in Swedish societies, men mainly make the household's economic decisions and that explains why women are less financially literate than men. Goldsmith and Goldsmith (1997) also argue that men are more financially literate because they are more interested in the issues of finance and personal investment and therefore tend to seek more information about these topics.

2.7.3 Education

As compared to those with low education level, those with a university or college degree tend to have more financial knowledge (Cole et al. (2008), Worthington (2004), Lusardi and Mitchell (2006, 2008), Almenberg and Säve-Söderbergh (2011), Guiso and Jappelli (2008), Alexander et al. (1998). Moreover, Mandell (2008) also finds that a positive correlation exists between education and literacy even at the early stages of the life cycle. In a numeracy test, children of college graduates performed better than children of people with lower education.

Furthermore, several researches also show a positive correlation between financial literacy and major study. Researches by Lusardi and Mitchell (2007), Almenberg and Säve-Söderbergh (2011), Beal and Delpachitra (2003), Chen and Volpe (2002) and Alessie et al. (2008) suggest that people who studied business or economics have a wide knowledge in financial matters.

2.7.4 Occupation

Another important determinant of financial literacy as find by many researchers is occupation. Among Australians, executives, business owners, farm owners and professionals were find to have the highest level of financial literacy while the unemployed had the least financial knowledge. Almenberg and Säve-Söderbergh (2011) and Monticone (2010) find same for Sweden. In Italy, those with white collar jobs, the self-employed and managers are the most literate (Monticone 2010). Cole et al. (2008) finds that among Indonesia, those who owned a non-farm enterprise had the most financial knowledge.

2.7.5 Area of Residence

There have also been studies to see the impact of area of residence in financial literacy. According to Cole et al. (2008), rural inhabitants have the lowest level of financial literacy.

Guiso and Jappelli (2003) argue that one's areas of residence determine the intensity of information the individual gets as regards the stock market. In a study by Monticone (2010), residences in Southern Italy are worse off in financial literacy skills than those in Northern part.

2.7.6 Nationality and Ethnic Background

With regards to ethnic background and financial literacy, Lusardi and Mitchell (2006) find out that in the US universities, Blacks and Hispanics are less knowledgeable in finance. In Australia, Worthington (2004) those with non-English speaking background is less likely to be financially knowledgeable. Among students in Malaysia, students from rural areas and Chinese students as well as those in their senior year had higher scores on their knowledge about their educational loans. In a research of 934 adolescents in Malaysia, where they were asked questions about consumer socialization, decision making style and socio-structural factors, suggest that Chinese youngsters, as compared to Malaysia were much less fashion-conscious, brand conscious and less recreational-oriented.

2.7.7 Wealth

As find by Delavande et al. (2008) and Peress (2004), the need to be able to manage one's own wealth has a positive effect on financial literacy. Wealthy people therefore tend to be more financially knowledgeable than those who are not wealthy.

2.7.8 Personal and Family Background

Researchers have find that male college students are more financially literate than female college students (DeVaney et. al, 1996; Chen & Volpe, 1998, 2002). It also find out that a student's major subject also affect his level of financial knowledge as those who major in business subjects were more financially literate than those who major in non-business subjects. Moreover, those from educated families scored higher in the financial literacy tests than those from families with less educational background. In the Jumpstart College Survey, Mandell (2008) finds that parent's educational level was constantly related to one's financial knowledge.

2.7.9 Retirement Plan Intention

Several researchers including (Fornero & Monticone, 2011; Joo & Grable, 2000; Rooij et al, 2007; Arrondel et al, 2013; Lusardi and Mitchell, 2007 & 2008; Al-Tamimi & Hussain, 2009; Agnew et al, 2005) have studied the link between retirement planning, financial literacy and savings in developed countries. Rooij et al, (2008) finds that in the Netherlands, those who are financially knowledgeable plan towards their retirement and therefore found a strong positive correlation between retirement planning and financial knowledge. Lusardi, (2008), using data from the SAVE survey to examine financial literacy in Germany, investigated the relationship between retirement planning and financial literacy and through that developed an instrumental variable strategy to be used across various regions to measure the financial knowledge of peers.

2.7.10 Financial Satisfaction

According to Falahati et al, (2011), one's financial status affected one's personal financial satisfaction. Various researchers have found a relationship between financial satisfaction and financial behavior, attitude, literacy and strain. Joo & Grable, (2000), investigate the variables that determine financial satisfaction and concluded that financial satisfaction relates, either directly or indirectly, to financial knowledge, financial behavior and financial solvency. Bell et al, (2009), conclude that an individual's overall satisfaction in retirement is enhanced by his financial planning.

2.7.11 Technological Changes and Market Innovation

The advancements made in the technological field have greatly influenced how financial services and products, are marketed, processed and delivered. The wide use of the internet as a communication delivery tool has led to the effective and efficient marketing of financial products and better customer service. Technology makes it possible to serve a large number of customers more speedily and more efficiently in less time without any limits to their geographical locations. The amounts of information available to individual consumers have greatly increased. However, to be able to benefit from these technological advancements and innovations consumers need to have working knowledge of finance as this will help them identify and access relevant financial information as well as evaluate how credible these information sources are. Technology has also made it possible to design specific products and services targeted at specific households and markets to match their peculiar needs and characteristic. These promote competition and hence improve customer service. However, there is the downside to technological advancement. Unscrupulous lenders can take advantage of customers' vulnerability to defraud them. Some customers may also be induced to buy products and services that do not meet or are not appropriate to their circumstances.

2.7.12 Changes in Personal Finances

Changes in personal finance have prompted more attention to the concept of personal financial education. Increases in consumer debt levels, and in personal bankruptcy filings as well as a decline in personal savings rates are all factors that have increased the need for more awareness on financial education. For example, outstanding household debt grew at an established 8.75% in 2011, although consumers' credit in 2001 was lower than that of 2000. However, borrowing by households was greater than personal incomes in 2001. These statistics calls for a greater interest to be shown in individuals' financial literacy programmes.

2.7.13 Available Financial Advisors

In developed economies, financial advisors are one of the main avenues to seek financial information especially where the individual want advice on mutual funds and other investment advice (Alexander et al., 1998). However, in spite of all the benefits individuals get from the advice of these financial advisors as per their financial decisions, it has been demonstrated that only a few of investors' fund that information delivered by financial advisors have lower risk-adjusted returns, higher trading frequency, portfolio turnover and higher portfolio risk. It can therefore be concluded that financial advisors offer benefit to investors which, although are important, are vague. These benefit may include helping the investor to manager their time more effectively and customizing their portfolio. It must be stated that unit trust consultants play a major part in the decision of individuals to invest their retirement savings in such trusts. Members who have a high regard for such consultant are more likely to invest in such unit trust.

2.8 Measuring Financial Literacy

The tools for measuring financial literacy vary substantially as does the conceptual definitions. Most researchers identify a variety of concepts that an individual who have participated in a financial literacy programme must understand to be considered financially literate. The most basic of these concepts are household cash flows, having an emergency fund and the reasons for it, understanding the capital market systems and financial institutions and the fundamentals of credit granting. What is included in the concepts to be studied will invariably have an impact on how financial literacy will be measured.

According to the President's Advisory Council on Financial Literacy (PACFL), measuring financial literacy is based on the content of the programme (e.g. investments, saving and debt) and the type of measurement strategy used (e.g. performance tests or self-assessments). It should be noted, however, that both of these methods i.e. self-assessment methods and performance tests have been used to measure financial literacy. Whereas self-reports assesses the individual's perceived knowledge or his confidence in knowledge, performance tests are basically knowledge based. However, it has find that people often perceive to know more than they actually do, not only in financial education (OECD, 2005) but also across a wide range of activities and knowledge. It must be noted that although perceived knowledge and actual knowledge are often correlated, the correlation is often minimal. Agnew and Szykman (2005) in their researchers found that correlation between perceived and actual financial knowledge range from 10 to 0.78 with a median correlation of 0.49 across 20 categories. Such variations have also been documented in other subject areas which are non-financial. Care should, therefore, be exercised when using perceived knowledge as a proxy for actual knowledge.

However, new evidence seems to suggest that perceived knowledge have a predictive ability of its own, which may be over and above actual knowledge. This trend may actually be explained by the fact that most individuals do not know the magnitude of their actual knowledge. They therefore decide on their actions depending on what and how much they perceive to know (Lusardi & Mitchell, 2007b).

The correlation between confidence and knowledge, though minimal, has a predictive validity. (Parker, Yoong, Bruine de Bruin and Willis, 2008) find that individuals with an assurance in perceived knowledge envisage self-reported retirement savings and plans. Moreover, they depicted a good performance on a hypothetical investment task, which was independent of their actual knowledge.

It is also important to make a distinction between financial knowledge, ability and behaviour and not to conflate them. Knowing how financial systems work will most likely form the basis for one's financial skills (e.g. navigating an investment site, negotiating mortgage terms) and also financial behaviours. However, there are other factors that influence skills and behaviour, e.g. access to resources and social networks. Therefore it is important to know the differences between perceived knowledge, actual knowledge and the ability to use that knowledge and actual behaviours.

Finally, numeracy tests have been used as a measure of financial literacy by some studies (Lusardi & Mitchell, 2007b). Basic number skills or numeracy is considered to be a distinctive measure that relates to and support financial literacy.

Figure 2.1 Conceptual Model of Financial Literacy

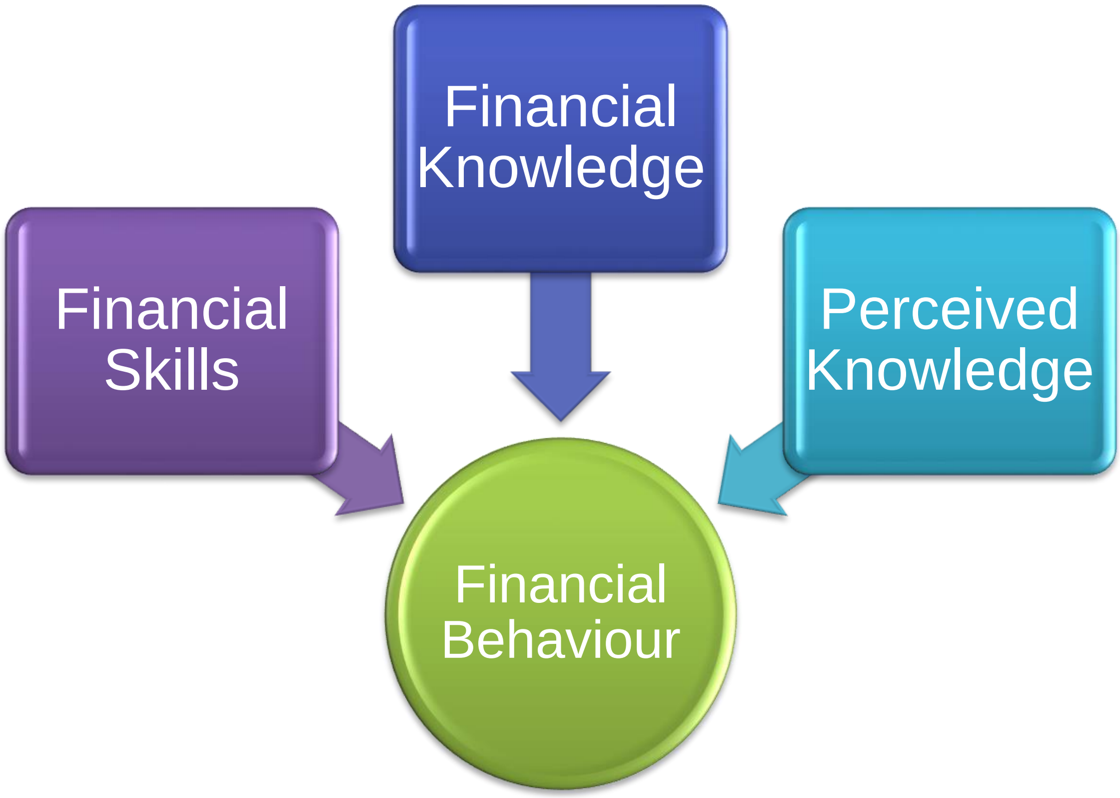

Figure 2.1 presents these logical relationships among financial literacy components. The mutual relationship between financial knowledge, skills and behaviour are important concepts in the theory of financial literacy. Financial knowledge, in particular, forms a basic part in financial literacy. It, in turn, reflects the individual's perceived financial knowledge and also impacts on the financial skills of the individual that depend on knowledge. However, actual financial behaviour depends on actual financial knowledge, perceived financial knowledge and financial skills. The experiences gained by the individual through financial behaviour also feeds and boost the individual's actual and perceived financial knowledge. However because of influences by other factors which could be internal or external, the relationship between these concepts is unlikely to be perfect.

2.9 Summary of literature review

This chapter explored literature on the subject under study; financial literacy. The chapter covered the concept of financial literacy, the elements of financial literacy as well as the determinants of financial literacy. The chapter also discussed relevant literature on measuring financial literacy and the critical success factors of financial literacy programs.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Chapter three gives an outline and description of the procedures that are used by this research. These include the research paradigm, the purpose of the study; population of the study and the sampling techniques. Methods of data collection and analysis are also highlighted.

3.2 Research Paradigm

The behaviour of every researcher is guided or informed by some basic and fundamental assumptions about the perception of the area of the research. These assumptions and perceptions serves as the intellectual framework within which the research is conducted. This is what is referred to as the research paradigm. Researches are normally influenced by some implicit underlying philosophies. According to Saunders (2009), there are two main philosophical thoughts which differentiate existing research paradigms. These are quantitative (positivism) and qualitative (phenomenology).

One of the most distinguishing features of quantitative research is that it is singular and objective (Saunders, 2009). There is no created avenue for the researcher to influence his or her own opinions or values and therefore the independence of the researcher and the research results from such opinions is assured. Although qualitative words are used in the descriptive of the variables and finding of the research, the discussions are based on specific and set definitions and the discussion is also formal. The processes that the research goes through are usually deductive and can therefore be easily used to establish a cause and effect relationship between the variable used. This relationship can then be used to predict future occurrences and explain and understand occurred incidences which involve the variables under study. Research through quantitative usually proves highly reliable, accurate and valid and can be replicated to have similar results if the same parameters and circumstances are present.

Close ended questions are usually used when using the quantitative method for the research. This gives the researcher the advantage of having a numerical data which when processed, is more observable, reportable and can be reported to quantifiable units.

In qualitative research, on the other hand, the researcher is free to interact with the research sample and also give his opinions about the research topic and problem. This makes the qualitative research method very subjective. Multiple means are also used to gather information from the respondents. These include open ended questions, interviews, observations and other interactive activities involving both the researcher and the respondent. As opposed to quantitative research, qualitative research centers, in emerging decisions and design and is very informed. It is also premised on theories and patterns in order to fully understand the research problem. However, the reliability, validity and accuracy of qualitative research method rely on verification. The quality of the research method depends on the quality and depth of the data gathered.

The quantitative research method is adapted for this study. The method affords the researcher the convenience of designing a single research study that had the two critical features of establishing relationship between the measurable variables used and also answers questions about the complex nature of the phenomenon from the view point of the participants.

The quantitative method is adopted for this research because it provides the most appropriate means of gathering information and measuring the parameters being required in this study. Moreover, the quantitative method provides more areas of strength and fewer weaknesses as compared to the qualitative method. However, the strengths and weaknesses of this method are relative to the manner and framework within which the researcher studies the phenomenon involved and is therefore not obsolete. Moreover, the nature of the research being conducted calls for the establishment of verifiable and reliable relationships between the variables involved so as to be able to give clear and concise recommendations.

3.3 Purpose of the Study

The purpose of the study could be exploratory, explanatory or descriptive. Explanatory research establishes causal relationship between variables (Saunders, 2009). Explanatory research emphasizes on explaining the relationships between variables used in the research. This method does not only describe the feature of the phenomenon being studied, but also analyzes and explains the reasons why the phenomenon happens and the manner in which they happen (Kothari, 2004). It is important in explanatory research to clearly identify and control the variables used in the research, as this helps to clearly explain the linkages, relationships and characteristics of the critical variables used.

According to Kothari (2004), the descriptive research method is used to describe phenomenon as they exists in their natural state. The method identifies a particular issue or problem and then proceeds to identify and obtain information on the features of the problem. As compared to the explanatory research method, the descriptive method does a more critical examination of the research problem at hand, because it seeks to identify and describe the features of the relevant issues (Saunders, 2009). The descriptive research method is most pertinent in answering research questions that have components such as "how" and "why". There are three fundamental principles that underlie the descriptive research method:

First, “why” and “how” questions are used. However, when the descriptive research is used to explore the variables involved, “what” questions are asked.

Secondly, there is no control over behavioural events when using the descriptive research method.

Finally, mostly contemporary events are focused on the case study.

The explanatory research method is used to explore and understand a situation clearly. According to Saunders (2009), the explanatory research method is a valuable channel to ask questions in a new light, to find out what is happening, to seek new insights and to evaluate trends in a new way.

For the purposes of this study, the exploratory and the descriptive research methods are used. The study is exploratory as it essentially aided in finding out the evidence of financial literacy among cocoa farmers and why some farmers are more knowledgeable than others.

The principal questions that this research seeks to answer are “what is the evidence of financial literacy among cocoa farmers in Ghana”. The descriptive research method follows a certain guidelines and procedures when collecting and analyzing data. The use of case studies in the research, according to Bell (2009), provides the researcher with an opportunity to within a limited timescale, extensively study an aspect of the research problem. This is one of the main reasons why the case study approach was adopted for this research as it is expected to be completed within a specified time frame.

3.4 Sampling Procedures

Saunders (2009) defines a sample as a subgroup taken from the population to reduce the amount of data needed. The sample for the study is cocoa farmers in the Central Region of Ghana.

3.4.1 Population and Sample

The population of any research gives readers the relevant information on the communities, organizations, groups or individuals on which the research is been conducted. The sample used for the research is taken from the population (Saunders, 2009). Cohen et al., (2011), describes population as the subject of a particular research within a group of people. For this research, the population is cocoa farmers in the Central Region of Ghana using Assin Foso and Twifo Praso Districts as the case study, which have been grouped under the Quality Control Company. The estimated population for this study is 2500 farmers.

A good research must have a plan to obtain a sample from the population given. This study is not an exception. Sampling, as used in this study is the method the researcher uses in selecting variables as his sample. Samples are a sub-group or part of a population in a study

3.4.2 Sample Techniques

Collecting data on all possible cases involved in the research can be costly and time consuming. Sampling techniques, therefore, provides a means by which the researcher can significantly reduce the amount of data to be collected by focusing on data from a subgroup rather than all possible elements or cases. Sampling becomes relevant in this study since it would be practically costly and difficult to be able to collect data from all (Saunders, 2009) cocoa farmers in the Assin Foso and Twifo Praso District in the Central Region of Ghana.

Sampling can be probability sampling or non-probability sampling or a combination of both. When the number of variables in the population cannot be individually selected or identified or is unknown, then non probability sampling is used (Kothari, 2002). On the other hand, probability or representative sampling is used in situations where the researcher makes inferences from the sample about the large population in answering research questions or where the researcher needs to satisfy some specific research objective such as in survey-based research strategies. The sampling frame for this study is a list of cocoa farmers in the Assin Foso and Praso Districts in the Central Region of Ghana from which the suitable sample size is determined. Considering the population for this study and looking at the limited time required to complete this work, it is unlikely that the whole population can be investigated. Hence, the cluster sampling technique is used. According to Saunders (2009), the researcher divides the population into perspective group before sampling. When using the cluster sampling approach, which is also similar to the stratified sampling approach. The formed groups are termed as clusters, and they can be any naturally occurring grouping. For the purpose of this study, the clusters are the cocoa farmers grouped within Assin Foso and Twifo Praso Districts in the Central Region of Ghana. In applying these thresholds, the total sample size for this study was 2500 famers.

3.5 Data Collection Methods

According to Saunders (2009), data are opinions, facts and statistics that have been collected and recorded for analysis and reference. Collecting data involves a systematic gathering process from various sources and for a particular purpose using media such as interviews, questionnaires, existing records, observation and electronic devices (Saunders, 2009).

3.5.1 Sources of Data

The research uses primary data. As contrasted with secondary data, primary data are collected first hand by the researcher while secondary data are taken from documentary sources (Saunders, 2009). Multiple–source secondary data, documentary secondary data and survey–based secondary data are all kinds of secondary data (Saunders, 2009). Using the multiple source secondary data is the stratagem of using data from either documentary data sources or from survey secondary data sources or a blend of these two sources. Sources for documentary data are minutes of meetings, notices, reports to shareholders, correspondence (including emails), administrative and public records and transcripts of speeches. Survey-based secondary data, on the other hand, is the kind of data that the researcher gets when he uses the survey strategy, for example the use of questionnaires, to collect data that have already been evaluated for their original purpose (Saunders, 2009)

Primary data on the profile of the respondent and evidence of their financial literacy was collected. Also, respondents provided information of why some of them are more knowledgeable than others. An advantage of using primary data is it assisted in collecting data for the specific objectives of this study. The questions for this study are tailored to elicit the specific data that answered the research questions of this study in order to achieve the specific objectives.

3.5.2 Data Collection Instruments

Questionnaires are a technique of collecting data in which each respondent is asked to respond to the same set of questions in a predetermined order. The researcher adopts the questionnaires due to the scattered nature of the respondents. Questionnaires are distributed to the farmers that are selected for the study. A combination of closed and open questions are used for this research. The choice of questions for achieving the aim of this study is influenced by the research questions and objectives.

The advantages of using questionnaires for this study are that, the researcher is able to collect enough data from large number of respondents in a way that is cost effective and requires a short time period. Moreover, the researcher can easily and efficiently quantify and analyse the result of the questionnaires provided in a more objective way of analysing the data.

3.6 Data Analysis

Following data collection is data analysis. According to Kothari (2004), computation of certain measures and the search for relationships or patterns existing among data groups is termed as analysis. During analysis, relationships or variances in support of or which conflict with original or new hypothesis are subjected to statistical test of significance to establish how validly the data can be said to indicate any conclusion (Kothari, 2004).

The study adopts both the exploratory and the descriptive data analytical approaches in analysing quantitative data. These approaches emphasised on the use of diagrams to understand the relationship between the data sets. On the other hand the descriptive statistics enables the researcher to describe (and compare) variables numerically. The data are coded with each question given a unique code. Data collected are edited, rationalized and collated.

Non-numerical data that are not quantified are called qualitative data. Normally qualitative data are gotten from classified non-standardized data which are evaluated through the use of conceptualization (Saunders, 2009). Analyzing such data qualitatively involves the following processes: summarizing the data gotten, categorizing them, putting the data in specific categories so as to establish and be able to recognize relationships and developing and testing the propositions so as to be able to produce conclusions that are well grounded.

An extensive questionnaire was designed by the researcher to seek respondents' knowledge about personal finance. Some of the questions were adopted from the work of Chen and Volpe (1998) on the analysis of personal financial literacy among college students. Aspects covered in the questionnaire include demographic characteristics, personal knowledge in personal finance, saving and borrowings, investments and insurance and personal financial opinion decision. The questionnaire had 43 questions: 7 on demographic data, 7 on insurance and investments, 4 on saving and borrowing, 17 on personal knowledge in personal finance and 8 on personal financial opinions and decisions. Two individuals who have extensive knowledge in personal finance evaluated it to test it for clarity and validity. Cronbach's alpha is use to further assess the consistency and quality of the survey. Analysis of Variance (ANOVA) was used to provide evidence of significant differences between the categories of respondents with respect to the various sections.

The participants' correct responses are used to calculate the mean percentage of the correct scores for all the questions, and sections. The mean percentage of correct scores is grouped into

i. more than 80% which represent a high level of knowledge;
ii. 60% to 79% which represent a medium level of knowledge;
iii. below 60% which represent a low level of knowledge.

A logistic regression model is use to analyse why some cocoa farmers are more knowledgeable than others. The regression uses gender, age, level of education, farm size and district as its independent variables and the level of subgroups as the dependent variables. The co-efficient used with each independent variable shows the effect of each variable on the dependent variables.

The logistic regression model takes the form of:

Log (p/(1-p) = Bo + B1 (GENDER) + B2 (DISTRICT) + B3 (AGE1) + B4 (AGE2) + B5 (AGE3) + B6 (AGE4) + B7 (AGE5) + B8 (EDU1) + B9 (EDU2) + B10 (EDU3) + B11 (FARMSIZE1) + B12 (FARMSIZE2) + B13 (FARMSIZE3) + B14 (FARMSIZE4) + e_i

Where

P = the probability that a farmer is knowledgeable about personal finance
Gender = 1 if farmer is a male, 0 otherwise
District = 1 Assin Fosu, 0 otherwise
Age1 = 1 if farmer is less than 18, 0 otherwise
Age2 = 1 if farmer is 18-30 years, 0 otherwise
Age3 = 1 if farmer is 31-40 years, 0 otherwise
Age4 = 1 if farmer is 41-50 years, 0 otherwise
Age5 = 1 if farmer is 50 and above, 0 otherwise
Edu1 = if farmer has primary education, 0 otherwise
Edu2 = if farmer has secondary education, 0 otherwise
Edu3 = if farmer has tertiary education, 0 otherwise
Farmsize1 = if farm size is less than 10 acres, 0 otherwise
Farmsize2 = if farm size is 10-20 acres, 0 otherwise
Farmsize3 = if farm size is 20-40 acres, 0 otherwise
Farmsize4 = if farm size is over 40 acres, 0 otherwise

Five categories are used to determine the level of financial literacy possessed by the farmers used in the survey. These are: very important, important, not sure, not important and not important at all. The farmers were also asked to make decisions on financial issues which are related. The sample was divided into two groups of farmers: those with more financial knowledge and those with less financial knowledge. A classification of the sample was done using the section median percentage of correct answer since the issues in each section are related. To statistically test whether the differences of the two groups' opinions and decisions are significant, the survey makes use of cross tabulations and chi-square tests.

3.7 Quality of the Research

When doing analysis of data, it is relevant to measure how valid and reliable the collected data is. For any research to be empirically justified and adopted, it is important that the data used is valid and reliable. The accuracy of the collected data is measured by its validity. It ascertains whether the statistical instrument used for the research actually measures what is it intended to measure. The reliability and validity or otherwise of the data used for the research depends on certain factors such as the features of the respondents, sample size, the number to include on the questionnaire and the types of questions to be asked. All these characteristics were considered when the questionnaire was been designed for this study. Moreover, the research instrument was shown to the supervisor before it was administered to the respondents.

3.8 Research Ethics and Limitations

In order to maintain and ensure that researches are conducted to a high ethical standard, there are guidelines put in place for researches to be conducted responsibly, and that is what research ethics is all about. There are a number of ethical considerations the researcher made when he was collecting data for this study. First, the explicit consent of the respondents was sought by the researcher before administering the questionnaires. Second, the purpose of the research was made known to the respondents. Third, respondents were assured of confidentiality. Forth, respondents answered questions anonymously to protect their interest. Fifth, the researcher clearly identified himself as a student of the Kwame Nkrumah University of Science and Technology (KNUST) pursuing his second degree with his student identification card.

3.9 Profile of Study Area

The Assin Fosu and the Twifo Praso Cocoa Districts are the two cocoa growing districts used as the population from which the sample is chosen for this study. They are located in the Assin North Municipal Assembly and the Twifo Atti Mokwaa District Assembly respectively. They are in the Central Region of Ghana. The region lies within the dry equatorial zone and the semi moist equatorial zone. Annual rainfall ranges from 1,000 mm along the coast to about 2000 mm in the interior. The wettest months are May-June and September – October while the drier period occurs in December –February and a brief period in August. These climatic conditions make farming one of the main occupations in this region. Whole households can be found to be engaged in farming.

Of the two cocoa districts chosen, about 65 percent of people in these two cocoa districts are farmers of which about 40 percent are primarily cocoa farmers. Of those farmers primarily engaged in cocoa farming, about 75 percent are males and 25 percent are females. Most of these farmers are not educated and therefore issues about finance and financial management are quite a big issue. Farmers are perceived to spend freely when the season for selling their cocoa beans is due and are therefore cash strapped a few months after selling their cocoa beans. They therefore fall prey to "loan sharks" who exploit these farmers and leave them in a cycle of poverty. This study therefore is to find out the level of financial literacy among cocoa farmers within these two cocoa districts and make appropriate recommendations to assist them in that regard.

CHAPTER FOUR

RESULTS AND DISCUSSIONS OF DATA ANALYSIS

4.0 Introduction

This chapter presents and analyses the data collected from the field. The data are analysed in line with the research objectives. The survey in the central region aimed at collecting data from cocoa farmers to assess financial literacy. It looked at evidence of financial literacy, why some farmers are more relatively knowledgeable than others and the influence of the farmers' financial knowledge on their financial decisions.

4.1: Characteristics of the Sample

A number of 667 farmers in two districts took part in the survey; the districts are Twifo Praso and Assin Foso. A total of 569 farmers responded which represent about 85.3% of questionnaires sent out. Table 4.1 presents detailed characteristics of the sample. 74.6% of the responded have some level of education and 25.4% had no education. Of the responded who have had some level of education, 57.8% have primary education, 27.8% have secondary education, 6.7% have tertiary education and 7.8% have had some other form of education such as learning a special skill like mechanics, electrician etc. Demographically, 61.6% are male and 38.4% are female. Respondent who are less than 18 years are 3.4%, those 18 – 30 years are 14.9%, those between 31- 40 years are 33.1%, those between 41 – 50 years are 30.4% and those above 50 years are 18.2%. Farmers who have worked less than 5 years formed 18.2%, between 5-10 years 34%, 11 – 20 years 30.8%, over 20 years 17%.

With regards to farm size which indirectly indicate their level of income, 60% of farmers had farmers less than 10 acres, 29.1% had farm between 10 – 20 acres, 8.5% had between

21-40 acres and 2.3% had farms over 40 acres. 46.1% of the responding farmers were from the Assin Foso District and 53.9% of the respondents were from Twifo Praso District.

Table 4.1: Characteristics of the Sample

		Number of respondents	Percentage
GENDER	Male	350	61.6
	Female	218	38.4
AGE			
	Less than 18 years	19	3.4
	18-30 years	84	14.9
	31-40 years	187	33.1
	41-50 years	172	30.4
	Over 50 years	103	18.2
EDUCATION			
	Yes	419	74.6
	No	143	25.4
LEVEL OF EDUCATION			
	Primary	268	57.8
	Secondary	129	22.8
	Tertiary	31	6.7
	Others	36	7.8
YEARS OF WORK			
	less than 5 years	103	18.2
	5-10 years	192	34.0
	10-20 years	174	30.8
	Over 20 years	96	17.0
FARM SIZE			
	Less than 10 acres	338	60.0
	10 - 20 acres	164	29.1
	20 - 40 acres	48	8.6
	Over 41 acres	13	2.3
DISTRICT			
	Assin Fosu	262	46.1
	Twifo Praso	306	53.9

Table 4.2: Mean percentage correct responses to each survey question. Each section and the entire survey

	Level of personal finance knowledge		
	Low Below 60%	Medium 60-79%	High Over 80%
I. PERSONAL KNOWLEDGE IN PERSONAL FINANCE			
Budget	49.2		
Investment	47.8		
Spending vs. Financial assessment		74	
Buying goods on credit will reduce purchasing power in future	56.1		
Asset liquidity	48.3		
Investment decisions	20.9		
Overspending	25.0		
Net worth calculation	35.9		
Personal financial planning	28.1		
Relevance of financial literacy	24.1		
If the world cocoa price falls, the price of cocoa will	36.9		
Treasury bills awareness	58.2		
Mutual funds awareness	26.7		
Saving awareness			85.4
Shares awareness	51.3		
Pension awareness		71.5	
Insurance awareness		64.7	
Mean Correct Responses for the section	**47.3**		
Median Correct Responses for the section	**48.3**		
II. SAVINGS AND BORROWINGS			
Practice of savings	58.9		
Personal understanding of savings	27.2		
Credit worthiness	32.3		
Loan co-sign consequences	41.7		
Mean Correct Responses for the section	**40.03**		
Median Correct Responses for the section	**37.0**		
III. INVESTMENT & INSURANCE			
Insurance practice	38.1		
Financial investments	35.0		
Purpose of insurance	24.3		
Personal understanding of insurance	26.9		
Personal understanding of interest rate	26.0		

Personal understanding of mutual funds	19.5
Buying a treasury bill is a good investment	57.3
Mean Correct Responses for the section	**32.4**
Median Correct Responses for the section	**26.9**
IV. PERSONAL FINANCIAL OPINIONS AND DECISIONS	
Investment finance decision	19.2
Importance of budget	46.6
Importance of spending within means	45.2
Importance of purchasing insurance	24.6
Importance of planning and implementing regular investment program	30.1
Importance of saving with financial institutions	41.7
Importance of monthly pension contributions	34.8
Mean Correct Responses for the section	**34.6**
Median Correct Responses for the section	**34.8**
Mean correct responses for the entire survey = 40.957	
Median correct responses for the entire survey = 36.9	

4.2 Overall result of the survey

Table 4.2 presents the overall results of the survey. There are three (3) groupings which show the mean percentage of the correct scores; that is below 60; 60 – 79 and over 80. The lowest score is represented first followed by higher score. The mean percentage score overall is 40.957, which indicates the percentage of respondents who answered the questions correctly. The correct score has a median percentage 36.9. The Cronbach's alpha which is 0.739 shows the reliability and validity of the questionnaire. The findings seem to suggest that the farmers used in the survey have inadequate knowledge on personal finance.

One reason for the inadequate knowledge in personal finance among the farmers is their low level of education. From the survey about 25.4% of the respondents have no formal education at all. Even among the formal educated respondents, 57.8% having only primary education. Among the 29.5% who have had secondary and tertiary education, knowledge of personal finance is still low because most institutions of higher education places little important on educating students on personal finance (Danes & Hira, 1987). Even students in business schools are not required to take course in Personal Finance Management (Bialaszewski, Pencek, & Zietlow, 1993). Second reason is that these farmers are mostly located in quite remote areas where most institutions trading in financial products do not find attractive for business. These institutions therefore do not spend any resources to educate there farmers on personal finance since they are out of their target group. Given these two reasons, the result that farmers are low on knowledge in personal finance is not surprising.

A reason for the low level of knowledge of the participants is because of the member of the respondents below 40 years. The results of the overall sample show that respondents above 40 years are more financially literate. About 51.4% of the respondents are under 40 years. This group of farmers may not have had enough exposure to financial issues related to savings, pensions, borrowing and insurance.

Table 4.3: Mean Percentage of Correct Responses to Each Section by Characteristics of Sample and Results of ANOVA

		Personal Knowledge in Personal Finance	Saving & Borrowings	Investment & insurance	Personal finance decisions	For the sample
GENDER	MALE	64.9%	65.4%	69.6%	71.6%	72%
	FEMALE	35.1%	34.6%	30.4%	28.4%	39%
	F Statistic	(1.834)	(1.882)	(2.246)	(2.489)	(7.503)*
AGE	Less than 18 years	0.8%	3.0%	3.5%	1.5%	10.5%
	18-30 years	20.0%	18.7%	14.8%	13.6%	82.1%
	31-40 years	38.1%	36.8%	41.7%	38.6%	72.7%
	41-50 years	25.4%	26.4%	24.3%	29.5%	59.3%
	Over 50 years	15.8%	15.1%	15.7%	16.7%	70.9%
	F Statistic	(0.125)	(0.093)	(0.109)	(0.222)	(0.027)
Farm Size	Less than 10 acres	61.8%	59.2%	47.8%	60.2%	64.5%
	10 - 20 acres	30.9%	31.1%	37.2%	32.3%	72.0%
	20 - 40 acres	6.2%	8.0%	13.3%	5.3%	70.8%
	Over 41 acres	1.2%	1.7%	1.8%	2.3%	92.3%
	F Statistic	(0.490)	(0.530)	(0.800)	(0.494)	(5.369)*
District	Assin Fosu	65.6%	66.1%	67.0%	60.4%	92.7%
	Twifo Praso	34.4%	33.9%	33.0%	39.6%	46.4%
	F Statistic	(0.519)	(0.509)	(0.485)	(0.645)	(183.0)*
Education	Primary	53.2%	50.8%	53.9%	54.0%	64.9%
	Secondary	31.8%	32.0%	27.5%	29.2%	82.9%
	Tertiary	9.0%	8.6%	11.8%	11.5%	90.3%
	F Statistic	(0.135)	(0.071)	(0.093)	(0.130)	(4.189)*

*Significant at 0.05 level

4.3 Analysis of results by sub groups of the sample

From Table 4.3, inference can be made that in terms of personal knowledge in personal finance, male farmers are more likely to be knowledgeable than female farmers in the central region. Similarly, with respect to savings and borrowings, investment and insurance and personal financial decisions, male farmers are more likely to be knowledgeable than female farmers. Generally, male farmers (72%) are more likely to be knowledgeable than female farmers (39%). The ANOVA shows significant difference between male and female across the sections.

Moreover, with respect to age and financial knowledge in personal finance, there is the likelihood that farmers between 31-40 years (38.1%) are more knowledgeable. Moving forward, with respect to savings and borrowings, investment and insurance and personal financial decisions, farmers between 31 – 40 years are more knowledgeable than the other age categories. It is also clear from the results that regarding investment and insurance, farmers over 50 years are more likely to be knowledgeable than farmers between 18 – 30 years. Generally, the study explored that farmers between 18-30 years are more knowledgeable.

The results further shows that farmers whose farm sizes are over 40 acres are more likely to be knowledgeable than farmers with farm sizes less than 40 acres. This may be due to the fact that a minority of the farmers have their farm sizes to be above 40 acres. Notwithstanding, with regard to the individual sections of financial literacy for the study, farmers whose farm sizes are less than 10 acres were revealed to be more knowledgeable. The ANOVA results showed significance differences between the farm sizes and the overall financial knowledge of cocoa farmers.

From Table 4.3, it is clear that 92.7% of farmers in Assin Fosu are more likely to be knowledgeable financially as against farmers in Twifo Praso. For instance, with respect to personal knowledge in personal finance, 65.6% of the farmers in Assin Fosu are more knowledgeable than 34.4% farmers from Twifo Praso. The results in Table 4.3 further shows that regarding investment and insurance, 67% of farmers who live in Assin Fosu are more knowledgeable than 33% of farmers in Twifo Praso.

Finally, with respect to the highest level of education of the farmers, the study revealed that a majority of 90.3% of the farmers are more knowledgeable than those without tertiary education. The implication is that, even though a minimum number of farmers have tertiary education, 90.3% of them are financially knowledgeable. Again, looking at savings and borrowings in relation to the educational level of the farmers, a majority of 50.8% of farmers with primary education are knowledgeable.

Table 4.4: Logistic Regression Analysis of the impact of participants' gender, district, age, level of education and farm size on the financial literacy

	Investment and Insurance	Savings	Personal Decision	Personal Knowledge	For the sample
GENDER	.235	.448	.235	-.174	.196
DISTRICT	20.994	4.568*	20.988	4.066*	2.673*
AGE1	.488	.378	.577	-.759	-24.017
AGE2	.291	-.539	.307	-.755	-20.513
AGE3	.058	.206	.053	-.652	-21.024
AGE4	.449	.206	.477	-.378	-21.573
AGE5	.644	1.607*	.598	.906	-21.155
EDU1	-.790	-1.095	-.809	-.151	.720*
EDU2	-.163	-.775	-.172	.133	1.393*
EDU3	-.885	-1.012	-.902	-.387	2.397*
FARMSIZE1	.360	1.653	.372	-.642	.184
FARMSIZE2	.053	1.908	.035	-.212	.680
FARMSIZE3	.268	.931	.265	-1.147	.645
FARMSIZE4	.200	.825	.156	-1.520	2.001
Constant	-0.342	-4.655*	-.342	-.327	19.332
-2 Log likelihood	410.648	743.137	409.789	418.938	502.148
Cox & Snell R^2	0.309	.529	.310	.476	.311
Nagelkerke R^2	0.465	.706	.467	.636	.435
Chi-Square	209.978	427.487	210.837	367.463	211.832
Correct Classification	77.6%	89.9%	77.5%	86.6%	76.2%
Chance Classification	76.4%	53.3%	76.4%	52.1%	67.8%

Notes: *Significant at 0.05 levels

4.4 The impact of participants' gender, district, age, level of education and farm size on their financial literacy

Table 4.4 shows the results of the logistic regression. A widely used measure of the overall fit of the model is the examination of its ability to classify the observations correctly. For the entire sample, 77.6% of the observations are classified correctly as compared to 76.4% chance classification.

4.4.1 Education

Generally, education has a significant impact on the level of financial literacy of cocoa farmers. Results from the logistic regression shows that EDU 1, EDU 2 and EDU 3 are significant factors in predicting the likelihood of financial literacy. Consistent with the findings of the research, the results suggests that educated farmers are more knowledgeable than the uneducated farmers. Consistent with the literature, the results of Mitchell (2006, 2008b), Almenberg and Säve-Söderbergh (2011), Guiso and Jappelli (2008), Alexander et al. (1998) and Mandell (2004, 2008) whose work explored a positive correlation between education and literacy even at the early stages of the life cycle.

4.4.2 Age

The age of cocoa farmers were also explored as important factors in predicting the likelihood of farmers' literacy. The study revealed that the age of cocoa farmers have a significant impact on the savings of the farmers. The regression results show that farmers who are above 50 years are likely to be knowledgeable in savings than those below 50 years. The results contradicts the work of Worthinton (2004) which finds out that among Australians, those aged between 50 to 60 years are less likely to be financially literate

4.4.4 Farm Size

The size of the farmers' farms which invariably has a direct link on the income level of the farmers also has no significant impact on the farmers finance knowledge of the farmers. The logistic regression results for individual sections and the overall sample, shows that the sizes of the cocoa farms do not have any significant impact on the financial knowledge of the farmers.

4.4.5 Districts

From this study, a major factor that has a likelihood impact on the financial knowledge of cocoa farmers is their geographical location. With regards to the geographical locations of the respondents, that is, their districts, it is realized from the results that their districts have a significant impact on their savings and personal knowledge as well as their personal finances. However, the results confirm the work of Cole et al. (2008) who concluded that rural inhabitants have the lowest level of financial literacy.

Impact of financial knowledge on personal finance opinions and decisions

This section of the analysis discusses the impact of financial knowledge on personal finance opinions and decisions among the cocoa farmers.

Table 4.5: Drawing a budget

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	14	12	35	57	60	178
	7.8%	6.7%	19.7%	32.0%	33.7%	100%
High financial knowledge	2	15	54	84	205	360
	0.6%	4.2%	15.0%	23.3%	56.9%	100%

Chi Square of 45.4919 with significant Level of 0.000

Table 4.6: Spending less than your income

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	15	12	24	36	77	164
	9.1%	7.3%	14.6%	22.0%	47.0%	100%
High financial knowledge	4	23	25	129	180	361
	1.1%	6.4%	6.9%	35.7%	49.9%	100%

Chi Square of 36.5971 with a significant level of 0.000

Table 4.7: Buying an insurance policy

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	13	26	44	58	33	174
	7.5%	14.9%	25.3%	33.3%	19.0%	100%
High financial knowledge	9	13	85	147	107	361
	2.5%	3.6%	23.5%	40.7%	29.6%	100%

Chi Square of 35.4648 with significant level of 0.000

Table 4.8: Planning and implementing a regular investment program

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	10	6	31	82	49	178
	5.6%	3.4%	17.4%	46.0%	27.5%	100%
High financial knowledge	8	21	54	165	122	370
	2.2%	5.7%	14.6%	44.6%	32.9%	100%

Chi Square of 8.2179 with significant level of 0.145

Table 4.9: Saving with a financial institution

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	14	8	31	64	60	177
	7.9%	4.5%	17.5%	36.2%	33.9%	100%
High financial knowledge	6	10	48	122	177	363
	1.6%	2.8%	13.2%	33.6%	48.8%	100%

Chi Square of 23.4531 with significant level of 0.000

Table 4.10: Contributing monthly pension

	Not Important at all	Not Important	Not Sure	Important	Very Important	Total
Low financial knowledge	7	13	29	51	52	152
	4.6%	8.6%	19.0%	33.6%	34.2%	100%
High financial knowledge	12	19	37	144	146	358
	3.4%	5.3%	10.3%	40.2%	40.8%	100%

Chi Square of 23.0539 with significant level of 0.000

4.5 Impact of financial knowledge on personal finance opinions and decisions

In this section, we examine how the farmers' opinions and educations about some personal finance issues are affected by their financial knowledge. Farmers that are classified as relatively more knowledgeable are those with scores higher than that median. Those that are classified as relatively less knowledgeable are those with scores equal to or below the median. The classification scheme used varies the number of observation in the two groups from section to section because the farmers' scores are equal to the median score. Moreover, the sample size varies from between 510 to 548 because of missing observations. Using these criteria, the sample is divided into two groups.

The farmers' responses to the importance of drawing a budget are reported in Table 4.5. About 56.9% of farmers in the more knowledgeable group rank drawing a budget as very important, 23.3% as important, 15.0% as not sure, 4.2% as not important and 0.6% as not important at all. The level of significance used to measure the differences in opinion is 0.000. An alternative classification scheme is also used to do an analysis of the results. Farmers who have section scores which are equal to or higher than the median are grouped as farmers with more knowledge, and those grouped under farmers with less knowledge are those with scores below the mean. When classified the way, the sample size of farmers in the more knowledgeable group is larger (358 – 370) than the farmers in the less knowledgeable group (152 – 178). 49.9% of respondents in the more knowledgeable group rank spending less than your income very important as opposed to 47.0% in the less knowledgeable group.

As regards to insurance, only 29.6% in the more knowledgeable group rank buying an insurance policy as very important compared to just about 19.0% in the less knowledgeable group. When it comes to planning and implementing a regular investment program, 32.9%

in the more knowledgeable group view it as very important whereas only 27.5% in the less knowledgeable group view it as important. The numbers edge slightly up though not significantly when it comes to ranking saving with a financial institution. 48.8% of the more knowledgeable group rank it as very important compared to 33.9% if the less knowledgeable group.

40.8% of the more knowledgeable group rank contributing a monthly pension as very important while 34.2% of the less knowledgeable group thinks so. The analysis made above from the results of the sample suggest that the farmers opinions are influenced by their level of personal finance knowledge and this in turn affects their decisions made about financial matters.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the general findings of the research in the context of the central ideas underpinning the objectives of this research. The perspective of this chapter does not only recommend solutions but presents the findings in relation to financial literacy among cocoa farmers. The key components of the chapter include the summary of findings, recommendations and conclusion.

5.2 Summary of Major findings

Findings from the study seem to suggest that the farmers used in the survey have inadequate knowledge on personal finance. Low level of education is one of the reasons for the inadequate knowledge in personal finance among the farmers. Another reason why the farmers have inadequate personal finance knowledge is their location. These farmers are mostly located in quite remote areas where most institutions trading in financial products do not find attractive for business.

The results of the responses were grouped into three; Low (below 60%), Medium (between 60%-79%) and High (over 80%). Findings from the study shows that the cocoa farmers have low financial knowledge in terms of personal financial knowledge in personal finance with an average score for correct responses to be 47.3% and median correct responses at 48.3% implying the financial knowledge of cocoa farmers in personal finance is low. Withal, the results demonstrate a high level of financial literacy in savings awareness with a mean Percent correct score of 85.4%. Also, the respondents' knowledge in spending verses financial assessment, pension awareness and insurance awareness for medium with the mean correct Percent of 74%, 71.5% and 64.7% respectively.

Findings from this survey revealed that, with respect to saving and borrowings, none of the farmers scored 60% indicating their low level in savings and borrowings even though they scored high on savings awareness. The study found out that the farmers are generally low in savings and borrowings with a mean correct score of 40.3%.

Similarly, upon assessing the respondents knowledge on, investment and insurance as well as personal financial opinions and decisions were critically low with mean correct scores of 32.4% and 34.6% respectively.

The study further revealed the factors that account for differences in the financial knowledge among cocoa farmers. From the study, their location of the farmers, thus, their districts were significant in predicting the likelihood of the level of financial knowledge. It was found out that, their districts are significant in predicting their level of financial knowledge in savings and personal financial knowledge as well as their overall financial knowledge.

Further, the levels of education were also explored as significant factors in predicting the likelihood of the farmers' financial knowledge. Primary education, secondary education as well as tertiary education was found out to be significant in predicting the overall level of financial knowledge among the cocoa farmers.

The age levels of cocoa farmers were also found out to be significant in predicting the likelihood of financial knowledge. Specifically, the study found out that age level 50 and above is significant in predicting the farmers' knowledge in savings.

5.3 Conclusions

In this paper, I report the evidence of financial literacy among cocoa farmers. From an empty space a decade ago, financial literacy is surfacing on every agenda, and that point to exciting times ahead. It can be concluded from the findings above that, greater percentage of the cocoa farmers in the study area are financially illiterate. The set objectives in chapter one are fully achieved. Stakeholders in the financial industry must put in place to reduce the level of financial illiteracy among cocoa farmers.

5.4 Recommendations

As a step in improving the financial literacy among cocoa farmers in the Central Region, the study provides the following recommendations: (i) rural outreach (ii) incorporating financial literacy into educational system and (iii) establishment of Financial Literacy Information Sharing Group.

First, it is recommended that the stake holders in the financial industry; Government, Financial Institutions, NGOs among others provide Financial Literacy training to rural communities, capitalizing on existing training and trainers in related areas. Financial literacy messages should be disseminated via community radios, information centres, televisions, farmer groups.

Second, financial literacy should be incorporating financial literacy into educational system**.** Financial literacy should be incorporated into the secondary school curriculum as part of the secondary school curriculum. Moreover, the study recommends a provision of financial literacy in primary schools through the development and dissemination of supplementary materials and the training of teachers in promoting financial literacy through extra-curricular activities.

Third, the National Commission for Civic Education should establish Financial Literacy Information Sharing Group**.** This group will be comprised of a wide range of stakeholders and other partners including government institutions, banks and other stakeholders in the financial industry. This group would provide a forum for the broad community of stakeholders and partners to discuss developments and potential developments, to highlight examples of good financial practices from which others can learn useful lessons and to provide feedback. The study provides the following recommendations for further studies:

1. Assessing the impact of financial literacy on the savings behaviour of farmers in Ghana
2. The prospects and challenges of financial literacy in Ghana

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APPENDIX

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY
COLLEGE OF ART AND SOCIAL SCIENCES
KNUST SCHOOL OF BUSINESS (KSB)
QUESTIONNAIRE FOR THE ASSESSMENT OF PERSONAL FINANCIAL LITERACY
PLEASE TICK THE MOST APPROPRIATE ANSWER FROM THE MULTIPLE CHOICES

Demographic Characteristics

1. Gender

- ☐ Male
- ☐ Female

2. Age

- ☐ Less than 18 years
- ☐ 18-30 years
- ☐ 31-40 years
- ☐ 41-50 years
- ☐ Over 50 years

3. Have you attended school?

- ☐ Yes
- ☐ No

4. Please indicate the level reached

- ☐ Primary
- ☐ Secondary
- ☐ Tertiary
- ☐ Other (specify)

5. Years of work

- ☐ less than 5 years
- ☐ 5-10 years
- ☐ 10-20 years
- ☐ Over 20 years

6. Farm Size

- ☐ Less than 10 acres
- ☐ 10 - 20 acres
- ☐ 20 - 40 acres
- ☐ Over 40 acres

7. District

- ☐ Assin Fosu
- ☐ Twifo Praso

A. Personal Knowledge in Personal Finance

8. Do you have a budget?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

9. Do you invest?

- ☐ Yes
- ☐ No
- ☐ Don't know
- ☐ Refused

10. Before I buy something I need to consider whether I can afford it

- ☐ Yes
- ☐ No
- ☐ Don't know

11. Buying goods on credit will reduce purchasing power in future

- ☐ Yes
- ☐ No
- ☐ Don't know

12. The most liquid asset is

- ☐ Money in a bank account
- ☐ Money in your house
- ☐ Cocoa beans
- ☐ A house

13. If you have any money left right before the next payment arrives, what would you usually do with it?

- ☐ Spend it on consumer goods
- ☐ Keep it in cash
- ☐ Deposit it or do not withdraw it from the account
- ☐ Lend it to friends or relatives
- ☐ Invest it in your own business
- ☐ Invest it in gold and jewelry
- ☐ Other

14. You are not overspending if

- ☐ You write checks for more than what you have in your bank account.
- ☐ You frequently receive calls from creditors.
- ☐ You spend all your money

15. Your net worth is

- ☐ The difference between your expenditures and income.
- ☐ The difference between your liabilities and assets.
- ☐ The difference between your cash inflow and outflow.
- ☐ The difference between your bank borrowings and savings.

16. **Personal financial planning involves**

- ☐ Establishing an adequate financial record keeping system.
- ☐ Developing a sound yearly budget of expenses and income.
- ☐ Minimizing taxes and insurance expenses.
- ☐ Preparing plans for future financial needs and goals.
- ☐ Examining your investment portfolios to maximize returns.

17. Personal finance literacy can help you

- ☐ Avoid being deceived by fraudsters
- ☐ Buy the right kind of insurance to protect your farm from risk
- ☐ Learn how to invest your money for your future needs
- ☐ Lead a financially secure life through forming healthy spending habits
- ☐ Do all of the above

18. If the world cocoa price falls, the price of cocoa will

- ☐ Increase.
- ☐ Decrease.
- ☐ Remain the same.
- ☐ None of the above
- ☐ Don't know

19. Have you heard of the following?

	Yes	**No**
Treasury bills		
Mutual fund		
Saving		
Shares		
Pension		
Insurance		

B. Saving and Borrowings

20. Do you save?

- ☐ Yes
- ☐ No
- ☐ Don’t know

21. I am saving when I

- ☐ Put money down to provide for an anticipated future relationship between my needs and income
- ☐ Have extra income after deducted expenses
- ☐ Put money down to enjoy interest and appreciation
- ☐ Put money down to enjoy gradually increasing expenditure
- ☐ Put money down to enjoy a sense of independence and the power to do things
- ☐ All

22. You will improve your credit worthiness by

- ☐ Visiting your local commercial bank.
- ☐ Showing no record of personal bankruptcies in recent years.
- ☐ Paying cash for all goods and services.
- ☐ Borrowing large amounts of money from your friends
- ☐ Donating money to charity.

23. If you co-sign a loan for a friend, then

- ☐ You become responsible for the loan payments if your friend defaults.
- ☐ It means that your friend cannot receive the loan by himself.
- ☐ You are entitled to receive part of the loan.
- ☐ Both A and B.
- ☐ Both A and C.

C. Investments & Insurance

24. Do you have any insurance?

- ☐ Yes
- ☐ No
- ☐ Don’t know

25. Do you have any financial investment?

- ☐ Yes
- ☐ No
- ☐ Don’t know

26. The main reason to purchase insurance is to

- ☐ Protect you from a loss recently incurred.
- ☐ Provide you with excellent investment returns.
- ☐ Protect you from sustaining a catastrophic loss.
- ☐ Protect you from small incidental losses.
- ☐ Improve your standard of living by filing fraudulent claims.
- ☐ Don't know

27. Which of the following statements is FALSE?

- ☐ Term insurance is an excellent investment vehicle.
- ☐ You receive no benefits when your term- insurance policy expires
- ☐ Term insurance policy is the least expensive form of life insurance.
- ☐ A decreasing-term policy reduces coverage over time.

28. If interest rates rise, the price of cocoa will

- ☐ Increase.
- ☐ Decrease.
- ☐ Remain the same.
- ☐ Don't know

29. Which of the following is FALSE?

- ☐ As a shareholder of a credit union, rural bank, microfinance you have a right to tell fund managers what securities to buy.
- ☐ A mutual fund is a diversified collection of securities used as an investment vehicle.
- ☐ A mutual fund is an investment corporation that raises funds from investors and purchases securities.
- ☐ Your ownership in a mutual fund is proportional to the number of shares you own in the fund.
- ☐ None of the above.

30. Buying a treasury bill is a good investment

- ☐ Yes
- ☐ No
- ☐ Don't know

Personal finance opinions decisions

31. Assume you're in your growing and becoming weak and you would like to invest for a secure retirement in 25 years, which of the following approaches would best meet your needs?

- ☐ Start saving with a bank.
- ☐ Put monthly savings in a diversified growth mutual fund.
- ☐ Invest in long-term Treasury and bonds.
- ☐ Invest with a pension trustee
- ☐ None of the above

32. Using the scale given below please rank the importance of the following items in order of importance from the scale 1 - 5 where:

1=Not Important at all,

2=Not Important,

3=Not Sure,

4= Important and

5=Very Important

	1	2	3	4	5
Drawing a budget					
Spending less than your income.					
Buying an insurance policy					
Planning and implementing a regular investment program					
Saving with a financial institution					
Contribute monthly pension					